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An Address.[1]

THE STUDY OF CHILDREN AND THEIR DISEASES.

By EDGAR H. M. STEPHEN.

President, New South Wales Branch of the British Medical Association.

I AM fully conscious of the honour of occupying the presidential chair, and am happy in the knowledge that the Council which you have selected has the wisdom and experience to guide the Branch safely through the twelve months during which I am in office. I am hopeful that my anxiety to do well will compensate for various shortcomings on my part.

[1] Read at the annual meeting of the New South Wales Branch of the British Medical Association on March 26, 1936.

The Branch has been fortunate in having had Dr. A. M. Davidson to fill the presidential chair. He has not spared himself in the performance of his duties, and he will be remembered deservedly for the vigour of his administration, for the soundness and effectiveness of his policy, and the attention he has given to all things, great and small, that concerned the welfare of the Branch and the maintenance of the prestige of the profession. We can congratulate him on a very successful year of office, and express our gratitude to him for the work he has done so well.

There is in existence a custom that on assuming the office of President of your Association, the new President should forthwith deliver an address.

Feeling all immature, I shall endeavour to perform this duty, and have selected as a subject the study of children and their diseases. This title conveniently covers the presentation of some views

which I consider deserving of consideration, some facts that are worth stressing, and some aspirations that require your help in order that they may be converted into achievements of public benefit.

I should like to begin with the young child of 1936 and to contemplate the advantages and disadvantages that follow from being a child of this period. Amongst the advantages are the appreciation of the value of fresh air, of sunlight, of rational clothing, of appropriate diet and the inclusion in it of the essential vitamins. Further advantages are the ability to recognize the presence of hypertrophied adenoids and diseased tonsils and to have the surgeons who can and will remove them where indicated. Another advantage is the recognition that defects of vision are not uncommon in childhood and that there are ophthalmologists who can and do detect these defects and prescribe treatment to remedy them.

The disadvantages for the 1936 child are also due to progress, a progress that at present, to my mind, is too speedy. So many children are advanced, and their parents and guardians congratulate themselves on the fact that they are advanced. It is indeed true that they are responsible for this state of mind of their young charges. For the first few months of life there is a period of peace for the child, with but few social engagements and little conviviality, but then ensues the interesting time for the parents of training the special senses, and they get to it with enthusiasm.

So far as I know, the sense of smell is the only sense that has an easy and unhurried career. I know of no parents who present a succession of odours, good or bad, to the nostrils of their infant. But once the unwary child is detected in the act of seeing things, watching things and recognizing people, his days of peace are over. A multitude of things are presented to his gaze, and with persistence. The luckless retina receives these images and is kept very busy. By twelve months the child has learnt a lot, and there is evidence that he recognizes heaps of people. He is wonderfully advanced! Twelve months later he travels in a speedy tram, held up to the window, or in a "Ford V 8" has countless objects exhibited to him at thirty miles an hour.

As regards speech, he is lucky if he escapes learning a new word every day. Think of it: 365 new words every year! No one past the sixth year of medicine could achieve it. For training the hearing the assistance of a gramophone and the wireless is enlisted. It is possible to seat a child on a musical chair and to feed him at the same time. One child of my acquaintance was saved this double event by the fact that when the chair played "The Merry Widow" there was an immediate evacuation of the bladder.

To my mind the ideal training is a sequestered life, a slow accumulation of visual and auditory impressions, a lullaby (not crooned), no hurrying machines of music, no speedy motor cars. In some ways the car-sick child is fortunate—he may escape brain fag.

Let him hear that ingenuous couplet: "Polly put the kettle on, we'll all have tea", instead of some logical or satirical modern rhyme. He will not be advanced, but he will not have nerves.

To turn again to the advantages associated with 1936, we can claim progress in knowledge, advances in diagnosis, and improvement in treatment. For this progress in knowledge we have mainly to be grateful to the pathologist.

The anæmias of childhood substantiate this statement. As a consequence, the anæmia of prematurity receives early administration of iron; *icterus gravis neonatorum*, a blood transfusion; nutritional anæmia, the diet, the dilute hydrochloric acid or the iron that may be required. Still more recently pathology has made us acquainted with the hæmolytic anæmia described by Lederer, with its dramatic onset and more dramatic relief on receipt often of but a single blood transfusion.

And then it is necessary to pay some tribute to the work that has been accomplished in investigation of the cerebro-spinal fluid. The quantitative and qualitative estimation of the cells in poliomyelitis has given the clinician an authoritative position in dealing with early cases of this disease. After bacteriological examination of the cerebro-spinal fluid he is able to adopt a hopeful attitude in cases of meningococcal meningitis and to administer appropriate serum with persistence and faith.

Recently I was present at the performance of a lumbar puncture, when examination of the cerebro-spinal fluid demonstrated that the little patient was suffering from a serous meningitis and was not the victim of a more dangerous disease. In this case a foreign body had been inserted into the nose. There was neither history nor nasal discharge to give warning that a piece of sea-shell was responsible for head retraction and irritability.

In the last twelve months there have been twelve patients with encephalitis admitted to the Royal Alexandra Hospital for Children. I investigated the notes of fifteen cases of encephalomyelitis. It appeared that measles, mumps, varicella, influenza, pertussis and bronchopneumonia were each responsible for one case. In the remaining nine cases no connexion with any specific disease was apparent. There was much variation in symptoms, from delirium and extreme irritability to unconsciousness. Papillitis, unequal pupils, ptosis, facial paralysis and inability to swallow were encountered in various cases. Even in the early days of the illness the temperature was not higher than 38·3° C. (101° F.).

The cerebro-spinal fluid was under increased pressure and was clear to slightly opalescent in appearance. Globulin was present, sometimes markedly. Chlorides were about 0·69%. Glucose

was present. The cells numbered about 21 per cubic millimetre of fluid; they were almost entirely lymphocytes. This point serves a useful purpose in aiding the distinction of this disease from poliomyelitis in its early stage. As many as 100 to 200 cells occur in rare instances. As regards the progress of the illness, three of my patients had a much delayed recovery, walking being resumed after many months, though muscular wasting was never pronounced. Temperamentally there was disturbance of disposition in two instances, but only of a temporary character.

I have often thought that a medical magazine which began its year with a description of "Fashions for the Year" in the matter of treatment would be popular.

Remembering the methods of 1905, 1915, 1925 and 1935 in the matter of diseases of children, one cannot but wonder why some worthy remedies are less used than before and why others of excessively hyphenated constitution now reign supreme.

In 1905 cod liver oil was the sovereign remedy for all vague ailments. In 1915 children were much dosed with calomel and had a thin time on albumen water; colonic irrigation occupied much of the spare time of the children and their attendants. As a sequel to the War, eusol was used to cure all wounds and to irrigate most cavities. The present-day child is kept in good health with various irradiated preparations.

One of the outstanding features of pædiatrics at the present time is the decline in gastro-intestinal disorders. Child welfare centres and clinics must be mentioned with admiration in this connexion.

There is something of interest to be said in connexion with the occurrence of acute rheumatism. There is provision in the Royal Alexandra Hospital for 100 general medical cases. In the last twelve months there were admitted 82 patients with acute rheumatism and 60 with chorea, which fact demonstrates in a striking manner the important place these ailments hold amongst children's diseases in Sydney.

Three years ago there were 30% fewer cases of chorea than at present, but the incidence of acute rheumatism was just as great. Estimation of the sedimentation rate has been a reliable index of the presence of active disease and of its subsidence. In chorea without cardiac involvement the sedimentation rate is normal; with cardiac involvement it is raised.

We have recently had two children with rheumatic nodules marked in degree and wide in distribution. Previous to this time nodules have been seen but seldom and have never been readily demonstrated, a point of distinction between our experiences in Australia and those in the Northern Hemisphere.

Rheumatic fever still depends on salicylate of soda as the sheet anchor in treatment. Without its use in adequate dosage the course of the disease would be even more sorry an experience than it already is. It is no longer derived from the willow tree, as in days of yore, but is a synthetic preparation.

To turn to the subject that I have most at heart tonight, let us consider the problem of diphtheria in New South Wales.

It is forty-two years since diphtheria antitoxin came into use. For at least forty years the culture of the Klebs-Löffler bacillus from swabbings of the throat has materially aided the diagnosis of diphtheria. Intubation for laryngeal obstruction has been practised for thirty-five years. Beyond these measures there is no advance to be claimed so far as we are concerned in New South Wales, with the exception of a few progressive towns. Elsewhere measures have been taken to immunize children against this disease, and it is, in my opinion, high time that New South Wales should do everything possible to lessen the incidence of diphtheria.

It is a great undertaking without doubt to immunize children of pre-school age as well as those attending school, but the desirability of a decrease in the number of patients with diphtheria makes a strong claim for immunization. Various methods of immunization have proved satisfactory: a single dose of alum-precipitated toxoid or three doses of anatoxin with the performance of the Schick test, if necessary.

There has been throughout the last year a series of cases of malignant diphtheria, and they have been attended by a high mortality. It is well to describe their characteristics in order to aid their diagnosis at as early a date as possible.

The onset is not usually alarming, pyrexia, vomiting and sore throat being the symptoms, but in a short time they are overshadowed by the appearance of a "collar" of swelling in the neck, lymphatic glands and subcutaneous tissues both being involved. Examination of the fauces reveals a distressing condition. There is profuse membrane with underlying necrosis, foul-smelling and tending to bleed; nasal discharge is present, at first brown, later blood-stained; the patient is prostrate and anxious, conscious that he is extremely ill, and finding great difficulty in swallowing.

The illness may end fatally after an extremely short course of forty-eight hours; it may continue till the ninth to eleventh day and terminate in sudden cardiac failure; or it may pass through a long convalescence, interrupted by pareses of the palate and limb muscles, to eventual recovery.

Bacteriologically it has been found that clinical cases of malignant diphtheria are due to the *Bacillus diphtheriæ gravis*. This bacillus occurs also in a certain percentage of cases not showing characteristic malignant features.

Of the total number of patients admitted to hospital, 20·8% died. These facts illustrate the fact that diphtheria is sufficiently dangerous to demand that steps be taken to control this disease.

In *The Journal of the American Medical Association*, October 25, 1935, there is an article by McKinnon and Ross on "The Reduction of Diph-

theria Following Three Doses of Toxoid". They give statistics to prove that in the city of Toronto following the progress of immunization the incidence of diphtheria has fallen, so that in a city of 630,000 persons there were in 1934 but 18 cases, and for a period of fifteen months there was not one death. They also draw attention to the decline in diphtheria in the non-immunized as well as the immunized.

Dr. Hilda Bull, in a lecture delivered here last April, pointed out that in an area of Melbourne in which Schick testing had been performed and three monthly injections of anatoxin had been given, the incidence of diphtheria had been far lower than in adjoining areas.

Queensland is carrying out work on similar lines. We have, therefore, plenty of evidence that if immunization be adopted we can obtain some security from this disease for the children of this State.

Dr. Ward, Professor of Bacteriology at the University of Sydney, has been very interested in investigation into this disease and is, I know, enthusiastic for the adoption of immunization.

The Minister for Health, the Honourable F. P. FitzSimons, and Dr. E. S. Morris, State Director-General of Public Health, expressed themselves warmly in favour of immunization at a recent conference of the Hospitals Commission with the Hospital Committee of the Branch. You have seen in the newspapers that plans to effect this are under way.

Members of the medical profession can assist materially by affording such a movement their loyal and consistent support.

So we have the prospect that in the place of diphtheria wards, crowded with patients, there will be extra beds available for those diseases which as yet we know no way of preventing. The death rate in children will be diminished and that dread spectacle of malignant diphtheria a thing of the past.

A few days ago I gave myself the pleasure of witnessing a surf carnival. The competitors were brown and muscular, and there seemed to be a veritable army of them. I felt convinced that these men must all have been wonderful children and that the typical child of New South Wales is a superchild; and then I sought for figures to confirm this hopeful idea.

In 1928, under the direction of Professor Harvey Sutton, while he was Chief Medical Officer of the Education Department, standards for New South Wales were framed on statistics obtained by an investigation of children attending the State schools. I was surprised to find that they were lower than Holt's tables for children in the United States. I felt convicted of arrogance and ignorance.

I rather long for a revision of these tables, as I think that this time New South Wales would show an advance. As regards children in the city of Sydney, I feel that they are larger and stronger than in previous years. They appear to me to have experienced more outdoor life than heretofore. In the summer months one's stethoscope is but rarely confronted by a skin that is not tanned by sun and breeze. We have evidence that malnutrition and rickets have definitely diminished. This sounds pleasing, but it also suggests to my mind that where we have travelled a certain distance and found the road good, we should hasten to travel further and find the road still better. Standards for expected weight and height would be useful to give us proof in black and white that progress has been made.

Medical schools are endeavouring to familiarize students with the diseases of children and, as you are perhaps aware, the students of the fifth year receive lectures and attend the Royal Alexandra Hospital for children. Instruction in pædiatrics consists of a series of lectures and demonstrations covering the methods of examination of children and the chief diseases occurring in childhood and their treatment. Groups of students attend the hospital for a complete term during the fifth year. They enter into all the activities of the hospital. The work consists of clinical clerking, attendance at ward clinics and instruction in special subjects. This is the description to be found in the calendar of the University of Sydney.

I am confident that it can be claimed that the time spent at the hospital is of value to the students. They have shown enthusiasm in their work in the wards, and increasing appreciation of the physical signs demonstrated to them. They estimate more keenly the importance of the history of the illness and the common-sense fact that the law of probability should be taken into consideration when making a diagnosis.

By the time their term at the hospital closes, their handling of the children and their method of examination give evidence that they have honestly striven to acquire due knowledge of the diseases of children.

We have reason to be grateful to that succession of inspiring teachers who have imbued the students of our medical school with an eagerness to know more.

We can claim that in this hall that same spirit lives and that with each succeeding year there is fresh record of service in the pursuit of medical knowledge by members of our Association.

Often as I enter this British Medical Association House I am impressed with it for many reasons, more especially because it reminds me of the character of those men who were responsible for its construction. It required courage to undertake such a big enterprise, and it involved the sacrifice of much time, energy and thought to see it carried through to a satisfactory conclusion. Very few members knew who these men were, and still fewer could tell one their names now. It was service rendered willingly and inconspicuously, and I think that represents the spirit of the British Medical Association.

SOME SUGGESTIONS ON THE PREVENTION OF MATERNAL MORBIDITY, WITH SPECIAL RELATION TO QUEENSLAND.

By C. V. Watson Brown, M.B., Ch.M. (Sydney),
Longreach, Queensland.

At no period in the history of the British Empire has the problem of puerperal morbidity and mortality reached such a pinnacle of importance as during the present era. It may be said to have passed from a mere problem of mothercraft to a vital problem of statecraft.

Sir Raphael Cilento, in 1933, delivered the Jackson Oration and discussed the falling birth rate, which "indicates with cold, mathematical finger an accelerating progress to a population stalemate at an early date". The theme has been developed in "Whither Away", a book by Dr. Jarvis Nye and Dr. John Bostock, from which one quotation will be given:

> There are those amongst us who state that as the world is already overcrowded, a falling birth rate should be a cause for rejoicing instead of alarm. With this we would be wholly in accord, were it not for the fact that between our island continent and our own kin in the Northern Hemisphere there are almost one thousand million frugal and industrious coloured people who, by virtue of our teachings of sanitation and hygiene, are multiplying at a remarkable rate and must clamour for an entry to our unutilized lands.

It must follow, quite independently of humanitarian reasons, that we as a race cannot afford to lose either mothers or children. Moreover, any methods which lessen the risk to life must have a psychological effect in reducing the fear which is the root cause of many childless marriages.

The ensuing remarks on the prevention of maternal morbidity are based on personal experience in my private and public practice.

Since Longreach, a town of 4,500 inhabitants, lies in latitude 23·27° and longitude 144·8°, 612 feet above sea level and 420 miles from the coast, the results have a special significance. The heat is at times excessive, the extremes of temperature ranging from 116° in the summer to as low as 30° in the winter. The average humidity for the year is 50. As a result of the aridity (average rainfall for the past ten years was 12·42 inches), all such localities lack those amenities of foodstuffs which are so easily obtained on the coastal belt. On theoretical grounds, had Nature wished to stage on a large scale a human experiment in avitaminosis, calcium deficiency and superabundant sunlight, her choice of our central districts would be ideal.

Maternal morbidity and mortality are almost synonymous terms. Morbidity produces such ill-health that in most cases the end result is the same. Pyelonephritis, carcinoma of the uterus and cervix, arthritis, the many effects of septic absorption, and other conditions too numerous to mention, which fill the consulting rooms of physicians and gynæcologists, produce such debility and general ill-health that chronic illness and an early demise result. Although pregnancy is regarded as a natural event, morbid conditions may occur throughout its entire course. Consequently every patient requires unceasing vigilance until such time as she returns to the condition she enjoyed before her pregnancy began. The means by which we may attain this are: (i) ante-natal supervision, (ii) natal supervision, and (iii) post-natal supervision.

Ante-Natal Supervision.

The most important step in attaining ante-natal supervision is the education of the public. An intense campaign by the medical profession and the authorities in charge of public health is urgently required. Some improvement during the past ten years is definitely noticeable.

The remarkable reduction in maternal mortality attained by such a campaign instituted by the authorities in Rochdale, England, is evidence of what can be effected by education. Oxley, Phillips and Young[1] have shown how a policy of intense education of the medical profession and public alike, inaugurated by Dr. Topping in Rochdale, reduced the mortality rate in this very low class population from 9·26 deaths per thousand registered births in 1929 to 1·76 in 1932 and 2·87 in 1933.

If he will only take the trouble, the general practitioner, with his intimate knowledge of his patients, can inculcate the ideas of necessary supervision. It may take time and energy and some persuasive power, but if he has the welfare of public health or preventive medicine at heart, he will find this work not only profitable, but of great comfort. Moreover, with this intimate knowledge of his patients' temperaments, habits and modes of living, he will not only be the best able to impress them with the necessity of supervision, but at the same time will be able to encourage them to believe that pregnancy and labour are natural physiological conditions which require only due care and watchfulness during their course. By this watchful and continuous care he will be able to give them confidence and allay that fear of childbirth which has such a psychological effect. As Eardley Holland writes:

> Amongst women in this country [England] the dominant emotion towards childbirth is fear—fear not only on the part of the woman who is going to have a baby, but on the part of her husband and relatives . . . . I am perfectly certain that a large proportion of the long, painful, lingering labours is due to functional disturbances of uterine activity under the influence of fear. It is a point which has not been nearly enough stressed.

Public health authorities can assist. Queensland has established in the past a well organized hospital system and we are led to believe that that system is shortly to be augmented. Most hospitals have an attached maternity ward separately staffed and quite efficiently laid out for the treatment of obstetrics; yet women attending antenatally as hospital patients are required to attend the out-patient department with the ill and the maimed. Little encouragement is thus offered them. With a little added expense, waiting rooms and consulting rooms could be set apart, with

regulated hours of attendance. More definite records of attendance could be kept and a continuous follow-up system could be better organized. Admitting that some of our pre-maternity clinics are ideal, the system could easily be extended to the whole State. By this means women would be encouraged to attend the clinics, and, if they failed to do so, could be better followed up.

The advertisement gained by the procedure would encourage more attendances and would also gradually remove the bugbear of confinements in homes. Unfortunately it is not yet possible in the cities to conduct all confinements in hospital, but this would be definitely possible in country centres if all medical men would refuse to conduct confinements out of hospital. Despite what may have been said against hospitalization of midwifery cases, it must now be admitted that all confinements are better conducted in hospitals specially equipped for such events. J. W. Ballantyne,[2] as far back as 1921, made a plea for more hospital accommodation for pregnant women.

> It is no exaggeration to say that many lives, maternal and fœtal, might have been saved, and many women might have approached the supreme strain of labour in a state much more likely to produce a successful issue if there had been means of giving adequate help in the months and weeks before confinement. . . . There ought to be far more maternity hospitals in the country [England].

To quote J. Haig Ferguson:[3]

> There can be no question that if the obstetrician can carry out, as nearly as possible, modern hospital methods in private practice he will obtain the maximum of success with the minimum of risk.

In the home today this is completely impossible.

The figures quoted by Dr. Constance D'Arcy[4] in the Anne MacKenzie Oration, 1935, go to prove conclusively the value of hospitalization of women during confinements. At the Royal Hospital for Women, Sydney (1933), the mortality rate, after allowing for patients admitted *in extremis* and those dying within twenty-four hours of admission to hospital, was 0·28%, while that for the State of New South Wales was 0·5%. Thus, by the education of the public, we may hope to attain the ideal of complete ante-natal supervision.

Ante-natal care has been defined as the expectant watchfulness of the expectant mother. This must be remembered by the obstetrician. His first duty to the expectant mother is to explain the requirements of this care, setting before her a definite plan of action, thus gaining her complete confidence and allaying any fear which she may have of the forthcoming event. Once this state of mind has been achieved, no further trouble will be experienced and she will give every assistance and cooperation. The taking of a history of her present condition, of her previous illnesses and her examination will be conducted without trouble; she will look forward to regular visits and will, if any untoward symptoms arise, inform her attendant immediately. A complete examination early in pregnancy is advisable. Teeth, throat and mouth sepsis and other minor ailments are then easily cleared up. The breasts are examined and necessary instructions for their care are given. The pelvis is examined, leucorrhœa, retroversion or other abnormalities are righted or noted. The size of the pelvis and of its cavity and outlet can be estimated. The use of the pelvimeter for this purpose is of very little assistance, as, although it may give some indication of the type and degree of deformity, it does not enable one to determine accurately the internal measurements. Minor degrees of contraction, as estimated by the pelvimeter, will undoubtedly have an adverse influence on the judgement of the obstetrician should the question of induction of labour have to be considered later. Dr. Aleck Bourne[5] even suggests its abolition in midwifery. Vaginal examination by the experienced gives more satisfactory results.

Urinary examination is imperative. Should there be any abnormality in the urine, a complete examination should be carried out. This is extremely important in Queensland, owing to the prevalence of nephritis. (L. Jarvis Nye:[6] deaths per 100,000 population, 20 to 40 years: Queensland, 322; New South Wales, 102; Victoria, 108; South Australia, 97; New Zealand, 71.) A persistent, if only slight, trace of albumin may mean a definite nephritis. Blood urea and urea concentration tests will clear up any doubt. As nephritis complicated by pregnancy is of such moment to the patient, it is the obstetrician's duty, before allowing the pregnancy to progress, to find out its extent. Many an unfortunate woman has had her health ruined and has gone to an early demise from neglect of this duty.

At this early stage morning sickness or hyperemesis is generally our first difficult problem. If this is allowed to go untreated, morbid conditions will arise and lead to many difficulties later in pregnancy. Provided the pelvis is normal, hyperemesis is undoubtedly aggravated by retroversion; the cause is metabolic and/or endocrine upset. To quote G. W. Theobald:[7]

> The hypothesis I have advanced is that there is no such thing as toxæmia in pregnancy, if by this term a toxin or toxins peculiar to pregnancy be postulated, and that all the manifestations enumerated above (*hyperemesis gravidarum*, excessive salivation, chorea, neuralgia, peripheral neuritis, tetany, *impetigo herpetiformis*, accidental hæmorrhage, acute yellow atrophy of the liver, severe anæmia of the pernicious type, the kidney of pregnancy and eclampsia), as well as the ordinary morning sickness and the proneness of the pregnant woman to suffer from decayed teeth, falling out of hair, brittle nails and less often bleeding of the gums, are expressions of dietetic deficiency or deficiency diseases.

Hypoglycæmia has been shown by many observers to be a clinical entity of considerable importance (Sippe and Bostock[8]). It may occur from a variety of causes and is often associated with ketosis, the lack of sugar being relative rather than absolute. In severe vomiting of pregnancy there is diminished food assimilation which originates this type of vicious cycle. The drain of feeding the child through lactation sometimes produces a similar result. In most cases the oral administration of

glucose, maize syrup or sweets of the "boiled lolly" variety will be sufficient. In this connexion, especially during hot weather, the tests for acetone and ketone bodies in the urine should be a part of the routine procedure. Chiefly because of diminished appetite, hypoglycæmia and ketosis are most common in the summer. G. W. Theobald[9] recommends calcium. He uses a solution of calcium gluconate, 10 cubic centimetres of a 10% solution intramuscularly. Cammidge[10] considers that hypoglycæmia is associated with an abnormal calcium metabolism. I have used "D.C.P. 340" (Parke, Davis and Company), together with glucose given by mouth, and had very good results. In severe cases admission to hospital, bowel lavage, glucose given *per rectum*, and injections of calcium have produced the best effects.

One patient in particular, Mrs. G.S., a *primipara*, came from the country when nine weeks pregnant. She was vomiting severely; vomiting had begun about the fourth week and had persisted so badly that she was unable to retain any food. Albumin was present in a heavy cloud; she was badly jaundiced, with headaches, and was mentally disordered. The systolic blood pressure was 160 and the diastolic pressure 90 millimetres of mercury. She was admitted to hospital and the emptying of the uterus was considered. She was given glucose, four ounces daily, *per rectum* and injections of calcium, together with stomach and bowel lavage. The vomiting decreased and at the end of a month she returned to normal. Calcium administration was continued and she was given a strict diet. A full-term child was delivered without further trouble.

Scholl and Steiner[11] have reported complete recovery from subacute yellow atrophy of the liver with the administration of 30 to 60 grammes of lævulose daily and a high carbohydrate diet.

Another condition that may be encountered is recurrent abortion. This, I think, is rare. Two cases in 750 pregnancies under review occurred in my practice.

One of these patients had had two miscarriages before the third month; a full-term child was then born after four months of threatened abortion, and another miscarriage occurred at the fourth month. The other patient had had two consecutive miscarriages. There was no apparent cause in either case. There was no reaction to the Wassermann test; the pelvis was normal; renal function was normal. Both patients were apparently normal healthy women.

The first patient, Mrs. W.B., became pregnant again in October, 1934. At six weeks she began to bleed; she was immediately put to bed, given calcium, "D.C.P. 340" (Parke, Davis and Company), and treated as previously without results. Then, on the advice of Professor Marshall Allan, I gave her "Antuitrin S" (Parke, Davis and Company), daily injections for six consecutive days (100 rat units per day) being given once each month. This treatment was continued for three months. The hæmorrhage ceased after the first month. She has had no further bleeding, is now in the eighth month of her pregnancy, and is perfectly well.

One case does not prove anything, but this treatment may warrant a trial, since this condition, as suggested previously, is probably an endocrine deficiency.

Allow me now to make a plea for the continual supervision of the patient. I consider that she should be seen at least once a month until the seventh month and more often from then to term. The last consultation should be as near term as possible. The abdomen should be examined at every visit, as this procedure insures the confidence of the patient and later is necessary in order to estimate the position and condition of the fœtus and, towards term, the size of its presenting parts in comparison with that of the pelvis.

Diet has become an essential factor in pregnancy, more particularly in certain parts of Queensland. There, with the continued droughts, long distances, unscientific carriage of perishable foods, and deficient and inadequate milk supply, it is a very difficult problem. A woman may enjoy reasonable health on a somewhat deficient diet, but the extra drain on her tissues, particularly in regard to calcium, phosphorus, iron and vitamins, due to the growing fœtus, will not permit this unless she receives dietary instructions. C. V. Pink,[12] in recording two thousand ante-natal cases without a death, has advised strict dietary *régime*, and considers that a light diet, consisting of a high proportion of uncooked salads and fruit, but no meat, appears to confer an immunity to sepsis, this being due to the immunity's being raised by a generous supply of vitamins, especially of vitamin *A*, and a reduction in autointoxication from the colon. He adds that care in the diet results in the earlier establishment of lactation, that the normal development of teeth depends on the assimilation of calcium, phosphorus and vitamin *D*, and that a deficiency of iodine in the blood, by causing too rapid excretion of calcium, produces faulty calcium metabolism.

The old bogy, "Eat double or enough for two", is still to be contended with. By a reasonably regulated diet such experiences as that reported by Barton Cooke Hirst[13] will not be encountered; a woman, in addition to her ordinary diet, took two quarts of milk a day between meals and was confined with difficulty of a child weighing eleven and three-quarter pounds. With reasonable and adequate diet the body weight of the new-born babe can be so restricted that its birth, by virtue of its size, will be less difficult. It has been possible, since putting patients on diet, to reduce the body weight of infants born, in my own series, from 3·77 kilograms (eight pounds five ounces) to 3·23 kilograms (seven pounds two ounces). Before maternal dieting 547 babies at birth showed an average weight of 3·77 kilograms (eight pounds five ounces); after dieting 100 babies showed an average weight of 3·23 kilograms (seven pounds two ounces). In dissecting these figures it was interesting to note that without diet the babies' weights ranged between 2·27 kilograms and 5·45 kilograms (five pounds and twelve pounds), whereas in the dieted series there was no infant born weighing heavier than 4·2 kilograms (nine pounds four ounces). This reduction of weight is best attained by a limitation of the carbohydrate element. Carbohydrates, being economical and easily obtainable, are likely to be taken in excess. This excess implies a deficiency in protein and fat and thus has a bad effect on correct metabolism

and adequate nutrition. Without carbohydrate fat cannot be completely metabolized; but an excess of carbohydrate in the diet produces an excess of fat in the tissues.

Holt[14] quotes Washburn and Jones's experiment with pigs:

> They found that pigs fed upon sweetened condensed milk put on an excessive amount of fat. The protein increase in their bodies was, however, much below normal and the bone development was defective, the bones being only two-thirds as strong as when whole milk was fed.

If, then, the mother's diet has a high carbohydrate content, it is reasonable to suppose that the fœtus will absorb the same elements and thus become excessively heavy; this increase in weight will be at the expense of its muscles and bony tissues. Besides the effect of increased fat deposit in possibly both mother and fœtus, it is suggested that a high carbohydrate diet has some influence on the production of dental caries. It also produces gastric disturbances and lowered resistance to infection. Diet should be confined to three meals a day, with meat once a day, eggs, milk and cheese, green vegetables, salads and fruit, wholemeal breads and all other wholemeal foods, while all substances made from white flour and all underground vegetables, together with sweets, chocolates *et cetera*, should be excluded. While it must be admitted that, apart from their carbohydrates, underground vegetables, especially potatoes, have very high food values, in the form of vitamin *B* and the necessary mineral salts, if allowed in the diet they may be taken in excess at the expense of the green vegetables, salads and fruits. In Queensland particularly a copious supply of water is essential, especially in the hot, dry central areas, where fluid loss is so excessive. Red meats, when there is any evidence of toxæmia, should also be excluded from the diet. Meat may cause severe damage to the liver, not because of its protein content, but possibly because of guanidine and the guanidine-like bodies it contains. It may be replaced by fish (especially herrings), which is also helpful in supplying iodine. Egg yolk and spinach, containing relatively high quantities of iron, are also valuable. Milk is probably the most important element in the diet. By virtue of its high vitamin and calcium contents it becomes an absolute necessity. In America today it is being realized that a calcium deficiency in diet exists. To quote Alice R. Bernheim:[15]

> 1. The average American dietary is poor in calcium content.
> 2. The calcium requirement is 0·070 gramme of calcium (1·0 gramme of calcium oxide) a day.
> 3. General health is improved and recovery from disease aided when the optimum calcium supply and utilization are assured.
> 4. Without milk or cheese in the diet it is difficult to obtain the needed calcium through food alone.
> 5. Utilization of calcium is ineffectual, even with a sufficient calcium intake, unless the factors that control the absorption of calcium are also adequate.

Calcium has been previously mentioned as a necessity in the treatment of toxæmias of pregnancy. Together with phosphorus and iron, it is essential to the diet, particularly during pregnancy. Osborne and Mendel's[16] experiment on the growth curve of rats on diets of low and high calcium and phosphorus values show how necessary are both in the diet. Rats showed slow growth when calcium and phosphorus were withheld, and rapid growth when they were supplied in adequate amount.

Not only is calcium necessary for the reduction of toxæmia and for the skeletal growth of the fœtus, but it is also necessary to relieve that nervous indigestion so often seen during pregnancy. According to B. A. Rhinehart,[17] uncomplicated gastro-intestinal irritability, commonly known as nervous indigestion, simple colitis, mucous colitis, spasticity of the colon *et cetera*, is a part of a general neuromuscular disorder. This condition appears to be the result of defects in the perfusion solution which bathes the muscles, nerves, brain and spinal cord. Researches and investigations show that the deficiency is chiefly in the metabolism of calcium. The errors in calcium metabolism are due to insufficient supplies of calcium and vitamin *D* resulting in latent tetany.

Sir Raphael Cilento[18] has stated that a calcium deficiency is found in New Guinea. I am convinced that a very definite calcium deficiency is occurring in western Queensland. This condition was first observed early in 1933.

Three cases of rickets occurred in children whose diets had been supervised. The children were partially breast fed, the diet being supplemented with modified cow's milk to which emulsion was added. During the time the children were being suckled drought was excessive and the pastures on which the cows grazed were inadequate; consequently the cows were in a very poor condition and the mothers were unable to obtain an adequate diet. Realizing that vitamin *D* was present, since emulsion had been added and sunlight was available, it was difficult to understand the presence of such definite rickets. The conclusion that the rickets was due to a calcium phosphorus deficiency was arrived at. This view is supported by Maxwell and Myles's[19] observations among women in China who had an essentially cereal diet with a low calcium and phosphorus content, producing osteomalacia in the women and rickets in the infants. That rickets is possible in breast-fed infants when the mothers have an inadequate diet has been shown by Ferguson[20] among Glasgow families—rhachitic and non-rhachitic—when the non-rhachitic families' diets contained ingredients of a much higher calcium content than those of the rhachitic families.

Toxæmia of pregnancy, as evidenced by constantly occurring albuminuria, was prevalent and, despite as careful attention to diet as was possible in the circumstances, the restriction of meat, with a copious fluid intake, regulation of bowels *et cetera*, this condition still persisted. After realizing that the rickets was possibly due to a calcium-phosphorus deficiency and that the toxæmia was an evidence of this, it was decided to supplement the diet with

calcium. This was given from the fourth month and continued to the later months of lactation, 3·6 grammes (60 grains) of "D.C.P. 340" daily, that is, 0·75 gramme (twelve and a half grains) of calcium element and 0·64 gramme (ten and four-fifth grains) of phosphorus. Definite improvement in the patient's condition and a great diminution in the incidence of toxæmia, as estimated by the albuminuria, were experienced.

In my series 62% of 481 pregnant women examined previous to the administration of calcium and phosphorus showed albumin; 16% of 88 women examined after the administration of calcium and phosphorus showed albumin.

It is to be regretted that inadequate laboratory facilities precluded the making of blood calcium estimations. A critic has suggested that a control series of parallel cases, with and without calcium treatment, should have been instituted. In a small community and with private patients this is unfortunately impracticable. A research along these lines would undoubtedly be well worth while, but it would need the larger resources of a government rather than those of a private practitioner.

"D.C.P. 340" is prescribed with "Bemax" in milk, "Vi-Lactogen" being used for those who are able to afford it, at 11 a.m. and 4 p.m. By giving it at those times it is more easily absorbed, does not interfere with the appetite and is more likely to be taken by the patient. It is quite inexpensive and within the means of most.

A. M. Mendenhall and J. C. Drake[21] have prescribed calcium antenatally in 576 cases, in the form of calcium gluconate or dicalcium phosphate together with vitamin *D*. They found that 1% of patients manifested toxic symptoms during pregnancy, as compared with 13% of those not given calcium; that the patients were enthusiastic about the relief of symptoms and their general well-being; and that there was no evidence that too much calcium might increase dystocia by over-ossification of the fœtal head. They concluded that a high percentage of women suffered from symptoms due to calcium deficiency; that those symptoms could be relieved by the proper administration of calcium and vitamin *D*; that calcium might help to prevent toxæmia, and that this treatment could be used with perfect safety.

E. C. White[22] recommends calcium therapy in the insomnia, polyneuritis, nervousness and irritability associated with pregnancy; and G. C. Richardson[23] considers that calcium, by its ability to neutralize guanidine, which appears to be the toxic agent in the graver toxæmias, is helpful in these cases; that it also reduces dental caries and prevents excessive blood loss by increasing uterine tone.

Iron is a further necessary element in the diet. Sherman[24] has estimated that the average American dietaries contain from 14 to 20 milligrammes of iron per day, and that they do not therefore furnish a sufficient surplus of iron to justify leaving the supply of this element to chance. Anæmia is a very constant concomitant of pregnancy. It is also to be found in the infant during the period of lactation. According to M. B. Straus and W. B. Castle,[25] two types of anæmia are found: (i) hypochromic anæmia due to a dietary deficiency, or associated defects due to the presence of fœtal demands for blood-building materials; and (ii) macrocytic anæmia due to the temporary lack in the gastric juice of the specific anti-anæmic factor.

The necessary iron is best supplied by foods containing a high percentage of animal protein, such as raw meats or, preferably, meats lightly cooked. Egg yolk and spinach are a reliable source of iron. Should anæmia be definitely present, raw meat juice, by virtue of its high iron content, namely,[26] 247·5 milligrammes per 100 grammes of protein, is inexpensive and of great value in the hypochromic type, while "Ventriculin" would be required if the macrocytic type were encountered.

All diets must be so designed that they have an adequate vitamin content; all vitamins must be present to produce a perfect standard of physical health.

Vitamin *A*, which in the diet suggested is present in the milk fat, butter and the green vegetables *et cetera*, and vitamin *D* are the most essential. Vitamin *A* is recognized today as much for its anti-infective as for its growth-producing powers. Marion B. Richards[27] claims that:

> Recent investigations have made it clear that the anti-infective, anti-keratinizing or health-preserving function of vitamin *A* is indeed all important and that its claim to "growth-promoting" activity is no greater than that of any other food constituent that is essential for optimum physiological development.

Vitamin *D*, which causes the absorption of calcium and phosphorus from the intestine and thus increases the calcium-phosphorus level in the blood, is urgently required when the calcium-phosphorus intake is low. It is advisable, where patients are in a position to procure it, to prescribe it in the form of "Radiostoleum". G. C. Richardson[28] states that activated ergosterol is essential to control the absorption from the bowel of calcium capable of assimilation by the body tissues and that the ergosterol, by this effect on calcium metabolism, will reduce tetany, puffiness of the face, hands and fingers, tingling, numbness, localized swelling of the limbs, pallor, thinning of the hair, dental caries and brittleness of the nails, so often seen during pregnancy. He also claims by its administration a reduction of the length of labour by one-third of the average with *primiparæ* and about three and a half hours for parous patients. Leslie J. Harris[29] states that:

> For nursing and expectant mothers extra vitamin *D* is essential . . . to improve the calcium assimilation of the mother herself and help her to replace the large amount of minerals lost to the child or in her milk.

Patients should be given vitamin *B* because of its effect in stimulating the flow of breast milk, its value in improving general health, and vitamin *C*

for its anti-scorbutic value; these vitamins are to be found in "Bemax" and the wholemeal foods and fruits supplied in the diet.

At the end of the fifth month some support for the abdomen and pelvis is necessary. About this time the sacro-iliac and symphysis synchrondroses begin to soften and the pelvic bones become slightly movable. This mobility, with the weight of the growing uterus, causes the centre of gravity of the body to become displaced forward. The lumbar muscles, in an attempt to correct this displacement, get into a state of cramp and backache results. A properly designed and fitting binder will relieve these conditions. The structure of such a binder must have two features: (i) it must support the pelvis firmly, and (ii) it must act as an uplifting and backward support to the abdominal wall and uterus. This mechanism can be simply effected by using huckaback towelling; the towelling is fitted well down over the hips and tightly bound to the level of the superior iliac spine and reasonably loosely to above the fundus of the uterus.

My patients wear a more elaborately designed corset, which is simple to adjust and inexpensive. This is made of "Indian Head" material to the measurements of each patient and is covered with artificial silk. It is on the "wrap-on" principle, with elastic gussets on each side of the lower portion. It is shaped to the abdomen by small darts and extends back and front from a little above the level of the umbilicus to below the level of the greater trochanter of the femur. The front folds over the abdomen and pelvis and is laced to the right side, while a second flap folds over the abdomen in the opposite direction and buckles at the left side. By the firm buckling of the lower portion and the loose buckling of the upper portion the desired effect, namely, the support of the pelvis with the upward and backward support of the abdomen and uterus, is attained. This corset appears cumbersome at first sight, but my patients receive such comfort from it that they will not go without it. When this type of support is used a normal fœtal position, especially in old *multipara*, is always better maintained. Pendulous belly and its associated bad fœtal position are relieved.

Before using my binder malpositions were encountered at the eighth month to term in 18% of 385 pregnancies; after using my binder malpositions were encountered in 6% of 182 pregnancies at the eighth month to term. This reduction in the incidence of malpositions is surely an aspect to be considered if we wish to reduce maternal morbidity.

Necessary exercise will help in this regard, and it is probably best attained by the evening walk and ordinary household duties, provided, of course, these do not entail heavy lifting and standing at the washtub. Physical exercises, so often recommended in text-books, are usually unnecessary, meddlesome and tiresome to the patient.

As auto-infection undoubtedly occurs and is a direct cause of sepsis, it is necessary to clear up any focal infection when possible. In early pregnancy teeth are attended to, antrum and tonsil infections can be kept under control, and all skin infections are rigorously treated. The common cold occurring near term may easily cause trouble. One patient, who developed an acute antrum and frontal sinus infection just prior to term, contracted a septicæmia during the puerperium with, later, a badly damaged pelvis, which, when operated on some six years afterwards, was a mass of adhesions. Leucorrhœal discharges should be attended to. These discharges are very often due to or associated with a secondary infection, particularly a parasitic infestation. This, if it does not directly cause sepsis, lowers the natural local resistance to pathogenic organisms introduced at or before labour. A regular inquiry into the presence of leucorrhœa should be made, and if it is present the swabbing of the vagina with euflavine glycerine (1 in 1,000) will clear up the worst cases before labour begins.

That dietary care and instruction are helpful must be admitted generally; but that they are an absolute necessity in the arid tropical regions of Australia is a conclusion that must be arrived at by anyone knowing the conditions under which mothers live in these regions.

People originally came to this country primarily to make their fortunes, not their homes; and in consequence they have been prepared to accept what was offering. Housing conditions have been unsuitable and inadequate. The excessively long, hot summer produces a lowered potential energy. Foodstuffs are difficult to obtain. The summation of these difficulties causes the prospective mother to become apathetic and prepared to take just what comes. In consequence, unless she is properly instructed, her diet, her exercise and her general methods of living are not conducive to a healthy pregnant state. So we would find her going to term in a mental and physical condition unsuited to the trials of labour and early motherhood.

Fortunately these conditions are gradually abating. Housing has been greatly improved by virtue of the Government *Housing Act*. Previously houses consisted of iron walls, roof and a couple of rooms, sometimes on the ground and often with earth floors. Now we see more substantial buildings of wood, some on high blocks, with well ventilated rooms, with blinded verandas often on two sides, and with attached kitchens.

When the woman spends practically the whole of her time in her house, there being little else for her to do, suitable housing conditions are essential. Houses should be well ventilated, on high blocks, with wide verandas, which must be blinded to relieve the excessive glare; the kitchen and wash-house should be attached, so that the woman will not be obliged to work outside in the blazing sun of the summer and the freezing cold of the winter. Ceiling is essential to modify the radiated heat of the sun and the draughts from the freezing winds of the winter.

Maybe all these suggestions appear overstated to those uninitiated in the living and climatic conditions of our arid tropical west; but to the initiated

they are looked upon as essentials if we wish successive generations to continue to populate this country with an indigenous virile people.

Owing to the good graces of the Government of Queensland, through its Education Department, and the Carnegie Institute of America, I have, fortunately, been able to make a study of these living conditions. I feel confident in stating that this experiment in colonization can be wholly successful, but that its success depends on sympathetic consideration from the government and education of the public in proper methods of housing as well as proper hours of work and adequate diet.

Natal Supervision.

Provided ante-natal care has been carried out efficiently, the patient will be in excellent health. I consider that at this time a woman is in better general health than at any other time in her life. For a period of months she has indulged in careful dieting, exercise and rest, and has something to look forward to with pleasure and delight. Her physical health is thus perfect and her mental and physical states are at their highest. The fœtal position will be normal, and the confinement, in these circumstances, should be a simple mechanical act, causing neither anxiety nor trouble.

The better the health of the patient, provided other things are normal, the less the pain experienced. Mary De Garis some years ago went so far as to say that childbirth could occur painlessly. R. C. Buist[31] also records cases of painless labour. I have seen one such case.

In any patient with a perfect state of health and mind and normal conditions of the presenting parts and pelvis, pain becomes greatly diminished. This reduction in the incidence of painful labour has a rather important aspect on pelvic morbid states. With painless labour laceration of the cervix is reduced to a minimum. In normal uncomplicated labour tearing of the cervix occurs very frequently. This tearing occurs almost invariably into the left side of the cervix and is generally only a small laceration. It does not appear to be of much consequence and generally heals somewhat, but it leaves a somewhat gaping external os and later some ectropion and erosion occur. This, of course, will produce cervicitis and may be a nidus in later life for many troubles, even carcinoma. These eroded cervices are a very definite cause of focal sepsis. The pelvis is undoubtedly a likely site of focal sepsis the clearing up of which will very often alleviate conditions such as rheumatism, arthritis *et cetera*, when no other cause for them can be found.

Narcosis in labour has reduced the incidence of pelvic laceration. Probably because with painless labour the first stage is slightly prolonged, the expulsive power of the voluntary muscles is reduced, thus allowing a more gradual dilatation of the os with consequent diminished damage.

Cervical tears occurred in 15% of 167 primiparous labours under narcosis, while cervical tears occurred in 80% of 194 primiparous labours without narcosis.

My figures may be an argument in favour of narcosis in labour; but at any rate they are an argument in favour of seeing that the pregnant woman goes to labour in the best of health, in a mental state of confidence and fearlessness of the coming ordeal, with her presenting parts and pelvis ready for the easy passage of the infant.

Labour should be conducted just as one would conduct a surgical operation. What difference is there between labour and any clean surgical operation? The bugbear of surgery is the introduction of sepsis, and so it should be with labour. What a huge more or less damaged area awaits the introduction of a few organisms.

A sterile operating theatre, sterile gowns, gloves, masks, a specially prepared patient, surrounded by sterile dressings, leggings covering the feet to the buttocks, the exposed buttocks, perineum and lower part of the abdomen painted with an antiseptic preparation—all equipment and every procedure that will insure asepsis and antisepsis should be adopted.

Such measures will require time, patience and trouble; but they are surely worth while, if by such care only 10% of the 570 mothers who died last year in the Commonwealth could have been saved.

Let us treat labour as a normal physiological mechanism with watchful expectancy, being alive to the accidents that may occur. Protect the perineum as much as possible, but not at the expense of the child—too long a delay at the perineum often causes fœtal death. Should a tear occur, it should be repaired as thoroughly as if a surgical perineorrhaphy were being performed. The mucous membrane, *levator ani* and perineal muscles must be sutured in sequence before the skin is worried about. The method of inserting a few silkworm gut sutures through the torn perineum is both barbarous and unscientific. A properly repaired perineum saves, and is probably the only thing that does save, the prolapse that would occur in later life if this were not carried out.

The too forcible expulsion of the placenta possibly has some effect in producing retroversion following the confinement. This is probably accounted for by the depression of the cervix towards the perineum and unavoidable stretching of the utero-sacral ligaments.

Text-books describe the procedure in accidents of labour and in abnormal labour, and the obstetrician must have full knowledge of these emergencies and act accordingly should occasion arise. The more intensive training of medical students in obstetrics is urgently required.

Post-Natal Supervision.

Care during the puerperium is as essential as in any other period of the pregnant state, although when the confinement is over the patient has a natural tendency to become lax, and this may lead to endless trouble.

Efficient drainage of the uterus is perhaps the first essential. With inefficient drainage sapræmia is a constant concomitant. According to the degree

of sapræmia conditions from subinvolution to definite sepsis may occur. Posture and uterine stimulation by massage and drugs are the best means of effecting this drainage. It is best for the patient to adopt the sitting position early in the puerperium, with short periods in a prone position on the abdomen with the buttocks raised. Massage of the uterus assists the involuting muscle to act efficiently, and such drugs as "Ernutin", strychnine and quinine have a similar effect and act as general tonics and circulatory stimulants. A subinvoluted uterus following the mildest of sapræmia will produce a chronically infected uterine mucous membrane and parametrium producing leucorrhœa and focal sepsis. Should definite sapræmia occur, perhaps the best treatment to adopt is intra-uterine injection of euflavine glycerine.

A constant watchfulness for septic states is necessary. A temperature above 37·25° C. (99° F.) should first always be considered due to the pelvis, which should be investigated before, as is often the case, the blame is placed on influenza or some such infection.

It is during the puerperium that the benefit of hospitalization of patients is so noticeable. Freedom from household duties, regular attention to diet and rest, and the regulation of the infant's habits have enormous influence on the general mental and physical well-being of the patient and infant. Such treatment reduces the incidence of those morbid nervous states which so often persist for months in patients not so carefully attended.

Despite what has been said in the past in regard to the high incidence of epidemic sepsis in hospitalization of midwifery patients, with properly constituted and controlled midwifery hospitals this incidence should be and is less than in unorganized midwifery.

The examination of the pelvis on the tenth day of the puerperium gives an opportunity of finding out the condition of the uterus and of the pelvis. If subinvolution is present, no patient should be allowed out of bed until it is reduced. A woman returning to her household duties with a subinvoluted uterus suffers a state of pelvic morbidity for which she will pay penalty for the rest of her life.

Another examination four to six weeks after confinement will give further information as to the state of the pelvis, and at that time such conditions as retroversion, parametritis *et cetera* can be treated with good effect and enormous benefit to the patient.

Today, owing to economic stress and strain and the inevitable seeking by the public for the limitation of families, the medical profession must face the inevitable: the question of contraception. What a tragedy it is not to be able to prevent the use of such barbarous appliances as gold springs *et cetera*, and to have to sit back and watch patients attending the gynæcologists' clinics with endometritis, cervicitis and filthy leucorrhœal discharges produced by mere ignorance and the use of appliances which have made quacks wealthy.

Conclusion.

It is contended that the prevention of maternal morbidity requires incessant care and attention. Medical research is ever widening the scope until the ideal prophylaxis is seen in its true perspective as the wise guidance of the patient in every phase of her social and individual existence. Diet, exercise, housing, clothing, hours of work and general health will need constant supervision until we reduce the scourge to one of negligible proportions. The multiplicity of factors makes their exact diagnosis difficult, but by patience and the use of ordinary clinical methods there is no doubt that much avoidable ill-health and many deaths can be prevented. With further research the position will be improved and our attitude should be one of optimism for the future.

Summary.

1. A review has been given of the problems of the prevention of maternal morbidity.

2. Avitaminosis and hypocalcæmia have been shown to be important factors, especially for those residing in tropical and arid zones, such as the interior of Queensland.

3. Favourable results of treatment by calcium and vitamins have been described.

4. A description has been given of a simple abdominal belt and a survey of its results in preventing malposition of the fœtus.

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References.

(1) W. H. F. Oxley, M. H. Phillips, H. Miles and J. Young: "Maternal Mortality in Rochdale: Achievement in Black Area", *The British Medical Journal*, February 16, 1935, page 304.
(2) J. W. Ballantyne: "The Practical Encyclopædia of Midwifery and Diseases of Women", 1921, pages 60, 61.
(3) J. H. Ferguson: "The Practical Encyclopædia of Midwifery and Diseases of Women", 1921, page 67.
(4) C. D'Arcy: Anne MacKenzie Oration, "The Problem of Maternal Welfare", The Medical Journal of Australia, March 30, 1935, page 385.
(5) A. Bourne: "A Plea for the Abolition of the Pelvimeter", *The British Medical Journal*, November 24, 1934, page 963.
(6) L. J. Nye: "Chronic Nephritis and Lead Poisoning", 1933.
(7) G. W. Theobald: "The Ætiology and Prevention of the Toxæmias of Pregnancy", *The British Medical Journal*, August 26, 1933, page 376.
(8) C. Sippe and J. Bostock: "Hypoglycæmia: A Survey and an Account of Twenty-Five Cases", The Medical Journal of Australia, February 18, 1933, page 207.
(9) G. W. Theobald: *Loco citato.*
(10) P. J. Cammidge: "Chronic Hypoglycæmia", *The Practitioner*, Volume CXIX, August, 1927, page 102.
(11) R. Scholl and P. Steiner: *"Über Versuche einer peroralen Zuckertherapie bei Ikterus gravis", Medizinische Klinik*, Volume XXVIII, June 17, 1932, page 864 (abstracted in *The Journal of the American Medical Association*, Volume XCIX, September 10, 1932, page 965).
(12) C. V. Pink: *The Medical Press and Circular*, June, 1934.
(13) B. C. Hirst: "Text-Book of Obstetrics", 1900, page 189.
(14) L. E. Holt: "Food, Health and Growth", 1922, page 130.
(15) A. R. Bernheim: "Calcium Need and Calcium Utilization", *The Journal of the American Medical Association*, April 1, 1933, page 1001.

(16) L. E. Holt: *Loco citato.*
(17) B. A. Rhinehart: "Increased Irritability of Gastro-Intestinal Tract: Discussion of Disturbed Physiology", *Radiology*, January, 1935, page 1.
(18) Sir Raphael Cilento: Personal communication.
(19) Maxwell and Myles: *Proceedings of the Royal Society of Medicine*, Section of Obstetrics and Gynæcology, 48, 1925 (abstracted in *Journal of Obstetrics and Gynæcology of the British Empire*, Volume XXXII, Number 1, 1925).
(20) M. Ferguson: "A Study of Social and Economic Factors in the Causation of Rickets", Medical Research Committee (National Health Insurance), Special Report Series, Number 20.
(21) A. M. Mendenhall and J. C. Drake: "Calcium Deficiency in Pregnancy and Lactation: Clinical Investigation", *The American Journal of Obstetrics and Gynecology*, Volume XXVII, June, 1934, page 800.
(22) C. E. White: "Use of Calcium in Pregnancy", *Journal of the Oklahoma Medical Association*, Volume XXVI, November, 1933, page 388.
(23) G. C. Richardson: "Viosterol in Pregnancy: Review of 300 Cases", *Illinois Medical Journal*, Volume LXV, April, 1934, page 367.
(24) H. C. Sherman: "Calcium Requirement of Maintenance in Man", *The Journal of Biological Chemistry*, Volume XLIV, 1920, page 21.
(25) M. B. Straus and W. B. Castle: "Studies of Anæmia in Pregnancy", *The American Journal of the Medical Sciences*, Volume CLXXXV, April, 1933, page 539.
(26) E. B. Forbes and R. W. Swift: "The Iron Content of Meats", *The Journal of Biological Chemistry*, Volume LXVII, 1926, page 517.
(27) M. B. Richards: "Rôle of Vitamin *A* in Nutrition", *The British Medical Journal*, January 19, 1935, page 99.
(28) G. C. Richardson: *Loco citato.*
(29) L. J. Harris: "Significance of Vitamins in Practical Experience", *The British Medical Journal*, August 26, 1933, page 367.
(30) R. C. Buist: "The Practical Encyclopædia of Midwifery and Diseases of Women", 1921, page 86.

SURGEON ALEXANDER COLLIE, R.N., 1793–1835.[1]

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THE pages of Australian history are splashed with the names of men of medicine who have distinguished themselves in other arts than that of healing. Some of them have had their names carved imperishably on the map of our country. George Bass is one. Alexander Collie is another. It is appropriate indeed that both these names should spring to my mind on the same instant, for there was much in common between Bass and Collie. Both were surgeons of the King's Navy. Both journeyed to Australia in the King's ships. Both added considerably by their explorations to the knowledge of Australia. The end of both of them was wrapped in sorrow. But there was an even more striking link between them. For Surgeon Bass it was who first discovered the presence of coal in Australia, ere yet he had cleared up the mystery of the strait which bears his name; while Surgeon Collie, by discovering the Collie River, placed (though he knew it not) the Collie coalfields on the map of Australia.

Standing here before this memorial to Surgeon Collie, in the centre of the town which boasts his name, and surrounded by a concourse of citizens on whose lips that name never dies, but rather grows to greater life, I am reminded of those many other names on our map which are also inscribed in the annals of medicine. Discoverers they were, but doctors, too, in their proper place assisting at a birth, even though it was of a nation; and you may still see their names scattered round the coastline and dotting the interior, like so many family physicians who, having watched the infant come to life, are now guarding him against those growing pains which so grievously afflict places as well as persons.

The glamour of romance hovers over each of those names. Their owners came from all parts of the Old World. They strode the decks of great galleons whose snow-white sails, bellying with the four winds, must have made a brave show as they burst onto this new continent and bore up and down our coast. They defied wind and weather, disease and danger and death; they subsisted on stale, mouldy, rotting food, oftentimes on no food at all. They faced the unknown with a laugh, related their discoveries without a flourish, and when their labours were done, looked on them merely as part of the day's work. They would have been astonished to know that a century later a wealth of romance was to grow up around their struggles with an untamed world.

Some French Names.

There was Péron, who lost his eye to a German bayonet, and his heart to a French lady. The one sent him into medicine, and the other across the seas to Australia. Cape Péron and Péron Peninsula remain to remind us of him; they conjure up the gory spectacle of a soldier of the Republic, a blood-stained rag athwart his face, marching down into history with a volume of Péron's "Voyages" under his arm. There was his comrade, Bellefin—Cape Bellefin recalls him—who was equally at home fighting the soul-destroying scurvy or dancing a wild fandango for the amusement of a tribe of Tasmanian aborigines. There was that other comrade, Taillefer, who snatched his chief, the dour Baudin, from the yawning grave, only to be sent home in disgrace—and then, by one of those strange turns of the wheel of fortune, to become Surgeon-in-Chief to Napoleon's Imperial Guard. Taillefer Isthmus is his memorial. It is that thin strip of land abutting on Lharidon Bight which, in turn, commemorates the Chief Surgeon of that French expedition whose greatest glory, in fact its only glory, lay in the heroic and devoted attentions of Surgeon Lharidon and his assistants to their disease-ridden and fast diminishing companions. And last, but most decidedly not least, we may sight Point Larry on our map, recalling a great surgeon and a greater man: personal physician to Napoleon himself, the only man who dared defy the Emperor, the only being on earth of whom it is said Napoleon stood in awe!

Two decades after the French expedition left these shores, King steered his tiny vessel into the bays and inlets of our northern and north-western coasts, inscribing the names of two British surgeons on his charts. Hunter River commemorates one; it summons up the figure of that Surgeon Hunter of King's third expedition, whose timely arrival with a shotgun saved the life of John Septimus Roe when a party of blacks was about to dispatch him. Montgomery Islands commemorate the other, in turn summoning up the figure of Surgeon Montgomery of the fourth expedition, whose skill once again saved

[1] Dedicatory oration delivered for the Western Australian Branch of the British Medical Association on the occasion of the unveiling of a memorial to Surgeon Alexander Collie, R.N., by His Excellency the Lieutenant Governor, Sir James Mitchell, K.C.M.G., at Collie, Western Australia, on November 23, 1935, being the 106th anniversary of the discovery of the Collie River. The memorial stands in the centre of the town, and takes the shape of a rugged granite monolith erected by the Mayor and Councillors and people of Collie.

the same John Septimus Roe, this time when he had fallen from one of the mastheads onto the deck of the ship. But for them, the name of Roe would not be the honoured symbol it has been for the past one hundred and six years of this State's existence.

A Pirate, a Bishop and a Governor.

To attempt to name all the men of medicine whose names stare back at us from our map, or from the pages of our history, would be impossible, and even were it possible, is not called for here. But some there are who cannot be passed over. They range from pirate—that Jerome Cornelius whose sanguinary story fills us all with horror—to priest, or rather to bishop—Martin Griver, Roman Catholic Bishop of Perth, who emulated the martyrs of old by having affixed to his back a large wooden cross, complete with nails, which for the greater part of his lifetime had bitten deeply into his flesh. They number Surgeon Wilson, the first white man to plot the Porongorups on the map, who commemorated a comrade (Surgeon Denmark, R.N.) in the Denmark River, and who is himself remembered by Wilson's Inlet; the gallant Surgeon Walker, who was the backbone of Grey's north-west expeditions and whom Mount Walker calls to life; and Dr. Laver, happily still with us, whose name lives in Laverton and is cherished by two generations of those hardy men and women who followed the gold. And they include a Governor of the colony, John Stephen Hampton—Hampton's Plains, with Coolgardie set in the middle, keep his name green—who gave us the Town Hall and the Barracks, and the first Fremantle traffic bridge over the river, who established the Post Office Savings Bank and the money order system, who built the first jetties at Geraldton and Bunbury, and who withal managed to hand over to his successor a colony absolutely free of public debt!

Collie Joins the "Sulphur".

Amid this galaxy of names Alexander Collie holds his head high as befits one whose countrymen have blazed the trail and bridged the gaps in many of the dark corners of the world. A Scotsman from Aberdeen, he graduated in medicine and faced the world as a surgeon of the Royal Navy. Service here and there in the piping years of peace which followed the Napoleonic Wars made of him, as it made of many another doctor in those days when science was in its infancy, a naturalist and botanist; and his last voyage before coming to Western Australia was in H.M.S. *Blossom* which, sailing round the world, gave him ample scope for his botanical studies and investigations. The result was a book which he was about to publish when death overtook him.

The first step taken by Surgeon Collie in the direction of Western Australia we may read of in his own words. They occur in a letter to his brother, George, at Aberdeen, written from Number 1, Cecil Street, off the Strand, on November 22, 1828. He wrote:

> My dear George, I am this day appointed to the *Sulphur* (a sloop) going out with settlers for the Swan River, New South Wales, where I am to be Surgeon to the Settlement, I suppose, as well as to the vessel, and where Dr. Burnett expects to get me a grant of land.

His expectations as to being surgeon to the settlement were of course premature, for Captain Stirling had already appointed Dr. Charles Simmons as the first Colonial Surgeon. This, however, made little difference to Collie, who, telling his brother of it a month later, states that he had had the option of another post as a consequence of his disappointment, but had resolved to remain with the *Sulphur* and proceed to the Swan River, where the opportunities for "collecting in natural history" seemed so great. Accordingly he sailed as arranged in H.M.S. *Sulphur*, having as fellow passengers Captain Irwin and the detachment of the 63rd Regiment which was being sent to protect and to foster the infant settlement. He had also with him on the *Sulphur* two ladies in whom I am particularly interested. The first was Mrs. Dance, wife of the commander of the *Sulphur*, who was to become Perth's god-mother; for it was she who put her axe to that tree the felling of which marked the foundation of the chief town of the new colony. The second was Ann Farmer, my own great-grandmother, who was to enjoy the distinction of being the first white woman to set foot in Perth. Actually it was not even Perth then, for she was lifted from the *Sulphur's* long-boat and set ashore on the strand, about where the Supreme Court now stands, on June 18, 1829, which was exactly two months before that eventful August 12, 1829, when Perth became Perth.

Arrival at Swan River.

The voyage on the *Sulphur* was not uneventful. Blown past Southampton on her way down the Channel, she had to put into Devonport, where Collie is found pointing out that the comfort of all on board, particularly of the wives and children of the soldiers, was seriously hampered by the presence of 10,000 bricks, in addition to all the baggage, being stacked on the decks. The ship was patently overladen, and in common humanity should be lightened by the transference of some of the passengers. This being attended to, we may skip the next six months and focus our eyes on H.M.S. *Sulphur* sailing into Cockburn Sound on June 8, 1829, six days after the arrival of the *Parmelia*.

But what with grounding on the banks and getting off again, and riding out storms and gales, Governor Stirling was still aboard the *Parmelia*, and it was not until the *Sulphur* came to anchor near by that things began to move and Garden Island to be occupied. Collie was one of the first ashore, examining the soil, the stones and rocks, the trees and flowers, and we may still read those first reports in his own handwriting. A few days later he was on the mainland carrying out the same examinations of the country on both sides of the River Swan, for more than a dozen miles from its mouth, which means as far as Perth and beyond.

Alas, Collie kept no detailed journal of those first and earliest days, and we are thrown back upon his letters to his brother, and on the official records. The first show him exploring and botanizing in and around Perth. The latter permit us to follow his other activities, at least to some extent. Thus on October 5, 1829, we find him applying for a grant of two square

miles of territory, a request which ten days later was answered by Surveyor-General Roe with the notification that he had been allotted "1,500 acres on the left bank of the Swan". Then it is silence until the eventful day, November 17, 1829, when in company with Lieutenant Preston, also of the *Sulphur*, he set off from the ship with two whale boats on the expedition which, six days later, was to roll back the doors of time and to reveal to him and us the Collie River rolling its everlasting waters down to the sea.

Discovery of Collie River.

From a practical hard-headed Scotsman we could not expect an exciting account of the discovery which was to fall to his lot. He had discovered a river. Well, he seems to have said to himself, why not? Was that not what I set out to find—and what I expected to find? So he wrote down the event in plain words and the plainest language. Let me read the entry in his journal which describes the finding of the river which Governor Stirling rightly directed should bear the discoverer's name.

November 23, 1829. Embarked at forty minutes past 4, having previously breakfasted, as soon as the surf and daylight would permit us. We kept close in shore, expecting to see some entrance to the lagoon we had left, but could discover no trace of one. Arrived at Port Leshenault at half-past 8. After giving the boats' crews some refreshment we proceeded in one boat to examine the port, and left the other with Mr. Cudlip to pitch the tents, dig for water, prepare the dinner, etc. About two miles and a half up we discovered a river flowing over a shallow bar to the estuary, and immediately made for it. Everyone was obliged to get out and drag the boat over a short distance, when the water became deep and very salt. Good land appeared on both banks; and we were soon among the natives who testified the greatest and most friendly eagerness to be allowed to approach us. There are two mouths to the river, with a low sandy island between them and the one we entered, the western-most, was afterwards found the least shallow. A second island is formed in the river not a mile up, and the water rather shallow, affording a good crossing place for the natives. About half a mile above this, the water being perfectly fresh we filled our barrels; and soon had our native friends around us. On returning, about 30 or 40 had assembled on the banks, and ran to the shallows at the mouth where they closely surrounded us, carrying green boughs, and without any weapons of offence or defence. The soil which we saw—and there was a long and wide reach beyond where we stopped—seems good and luxuriant except on one or two heights, where the sand predominated so much as only to support a few shrubs, banksias, and few eucalypti. The head, which runs out to the westward of the entrance, is bare of trees but covered with shrubs and a little grass, and composed of sand mounds, except on one side where on a level with the sea a black and hard rock is washed by the sea. This rock appeared to be continued more or less exposed for a considerable distance towards Geographe Bay . . .

Collie Takes up Land.

For these discoveries Governor Stirling made a public grant to Collie and Preston of 2,000 acres each. Collie was already beginning to acquire a considerable acreage in various parts of the colony, both on his own account, and in partnership with Purser Sholl of the *Sulphur*. Here it may not be without interest to point out that the earliest settlers received grants of land according to the value of the property which they brought with them into the colony, forty acres being allotted them for every £3 worth of such property. Collie and Sholl accordingly pooled their possessions and lodged a list of property, which reads very quaintly at this distance of time. It included six sows, one English pig, six young English pigs, three spades, two pick-axes, three rakes, two hoes and three pounds' worth of garden seeds. The total value of these items and of other property in their possession I have mislaid, but in April, 1830, we find the partners taking up 5,000 acres in the Plantagenet district. Part of this they were next year permitted to exchange for a grant at Leshenault, while again a year later there was allotted them a further 2,560 acres.

Town property also interested Collie, and we find him the holder of three lots in Perth, as well as part-owner with Sholl in another block at Fremantle and two more at Albany.

In July, 1830, Governor Stirling interrupted Collie's explorations by sending him to Clarence, near Rockingham, the dream capital of Peel's ill-fated settlement, to inquire into the epidemic of disease which had carried off twenty-eight settlers of the 400 gathered about there. Collie found the greater number of the remainder ill with one thing or another, and in his report suggested remedies which put a stop to the rot. But it was the beginning of the end of the Peel settlement.

Government Resident, Albany.

The next scene of Collie's activities was King George's Sound. If you go into the Public Library at Perth and mount the spiral staircase to the gallery you may see for yourself a number of the first newspapers, both written and printed, that were published in the colony more than a hundred years ago. They are exhibited in a big glass frame, and among them is a tattered and faded copy of the *Perth Gazette* dated May 18, 1831. It is but one sheet in size, is written in longhand, and is priced three shillings and sixpence per copy! In it you will see two notifications referring to Surgeon Collie. The first appoints him a justice of the peace for the colony. The second appoints him Government Resident at King George's Sound. It seems a pity that Colebatch did not sight these before he wrote it down in his "First Hundred Years", which was the official record of the State's history and progress issued during the centenary year, that Sir Richard Spencer was the first Government Resident at Albany. The honour belonged to Collie, and he deserves the correction if only because he took the post against his own inclinations and in deference to Governor Stirling's wishes, even though it meant that he would be several guineas worse off than if he remained in Perth. Two guineas a week was a large sum to lose in those days of small salaries—his salary as a naval surgeon in fact was only two guineas a week, or rather six shillings a day; but while ashore he was drawing a special allowance of seven shillings and sixpence *per diem*. However, he set against his pecuniary loss the added chance he would have of increasing his natural history collection, and consoled himself with this and the fact that he was doing his duty.

He was not happy at Albany. "I put up with my exile from Headquarters", he wrote on July 28, 1832, "to this lonely spot as the Governor wishes it, not having any person whom he can appoint in my stead." There was nothing to do, he went on to complain—just the same dulness day after day, no books to read, no fresh faces, only forty souls in the

place, and his asthma kept him from any writing. But his active mind and body could not keep still, and in the same letter we read later on: "I went 65½ miles the other day right towards the Swan with the greatest ease in 4½ days!" He went in other directions, too, in fact in every direction from Albany, visiting the Porongorups to verify Wilson's discovery, and tramping along the banks of the Denmark and the Kalgan Rivers. His observations on what he saw are interesting, but I will quote here but one observation based on his survey of the land and of its potentialities:

> Colonists to be of any use to themselves or others should be in great numbers. Sooner or later Western Australia will be populous, will be fertile, will be a land o'erflowing with milk and honey, before Sydney, before Van Diemen's Land, before the Cape.

Colonial Surgeon, Perth.

Surgeon Collie left Albany for Perth towards the end of 1832 to assume the office of Colonial Surgeon, vacant by the death of Dr. Charles Simmons, the first Colonial Surgeon. His first action was typical of his thoroughness: it was to write his brother George for the very latest books on medicine and surgery in all branches, and for his own medical library to be sent out to him from Aberdeen. His next move was also typical of him. Objecting to paying £35 *per annum* rent for a house when he possessed three vacant lots of his own, he determined to build a home for himself. He built it on his block in St. George's Terrace facing Government House (the Presbyterian church stands there today), and in his letters for the next two years we read all sorts of details about what he does not hesitate to describe as "the finest house in the colony".

> My house is roofing [he wrote on August 6, 1833]. I told you it would cost £500 besides outhouses. Some say it is the best looking in Perth. I shall let it to the first tenant who shall give me £120. The new house proceeds slowly [he wrote in his next letter]. I am obliged to wait for the heats of summer to season the flooring boards before they are laid, otherwise the gaps between them would be from half to one inch. There is no seasoned wood to be had. People say it is the best in the Colony.

Six months later it was finished, and he wrote to his brother jubilantly:

> At last I have got into my own house, thereby saving £3 per month rent. It is 30 feet by 16 feet inside the walls, and consists of six rooms with a lobby, having a double verandah in front. It is of brick, plastered inside but not painted. The roof is shingled. The doors are mahogany.

Duty Well Done.

Surgeon Collie was not to enjoy his new home for long. During the whole of his life in Western Australia he was a very sick man. He called his complaint asthma, but it was in reality pulmonary tuberculosis, and its troublesome cough racked his frame incessantly. Still he scorned to give in, to let it interfere with his explorations of the country, with his researches into natural history, and with his medical attendance on the poverty-stricken population. He was ever an example of duty well done, a beacon-light both to his successors in the art of healing and to those who for several generations to come were to spend their lives struggling against terrific odds that we, today, might reap the result of their labours and of their privations.

Governor Stirling had no doubts as to the value of Collie's services to the colony, and on the eve of his departure instructed Colonial Secretary Peter Brown to convey his good wishes. This was done in a letter dated October 10, 1835.

> In transmitting to you [Peter Brown wrote in his cold official manner] the Governor's sanction to your absenting yourself from your official duties for a period of two years from the date hereof, to enable you to try a change of climate for the recovery of your health, I have been directed to express His Excellency's regret that such a step should have been necessary, and to assure you that you will carry with you his sincere wishes for its full re-establishment.

Governor Stirling's good wishes were in vain. In less than a month Surgeon Collie was dead at the early age of forty-two. About to board the ship at Albany which was to have taken him to his beloved Scotland, the end came suddenly on November 5, 1835. He is buried at Albany. Fittingly his grave is number one in the cemetery where he rests; but far from fitting is its neglected condition, with no stone to mark the spot. It is an oversight, say rather a slur, which this day's ceremony will help to rectify.

You, Mr. Mayor and Councillors and people of Collie, have roused us to a sense of duty. With all my heart I congratulate you on the tribute you have paid to a good and brave man. It is appropriate in the fullest degree that such a memorial should be erected on the anniversary of the day on which he discovered the river which bears his name, and which in turn gave the name to this town which has risen on its banks. And I have only to add that, speaking in the name and on behalf of all my colleagues in the profession of medicine, not only in the State of Western Australia, but in the Commonwealth of Australia, I am sure, I salute with respect and affection the memory of Alexander Collie, surgeon, explorer, administrator.

THE ULTRA-VIOLET COMPONENT OF SUNLIGHT IN SYDNEY.

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and

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(*From the School of Public Health and Tropical Medicine, University of Sydney.*[1])

Some years ago figures giving the variation throughout the year of the ultra-violet component of sunlight in Sydney were required, but none appeared to be available. It was then decided to make the necessary observations at the School of Public Health and Tropical Medicine, University of Sydney.

The zinc sulphide method advocated by Janet Clark[1] and the methylene blue method of Leonard Hill[2] were both tried, but were found to be

[1] Endowed by the Commonwealth Department of Health.

unsuitable. The method finally selected was that described by Freer[3] with the slight modifications in technique as introduced by the Anglo-Persian Oil Company in its investigations in Persia.[4] In this method three solutions are required: a 1% solution of uranium acetate, a 10% solution of oxalic acid, and a 0·498 N solution of potassium permanganate.

A flat-bottomed dish about 12·5 centimetres (five inches) diameter and 3·75 centimetres (one and a half inches) deep, having the sides and bottom covered with black paper, was used. Into this were placed 5·0 cubic centimetres of uranium acetate solution and 5·0 cubic centimetres of oxalic acid solution, together with 20·0 cubic centimetres of distilled water. The dish and contents were exposed to direct sunlight for an hour. The contents were then titrated with potassium permanganate.

Before exposure the uranium acetate-oxalic acid solution required 15·9 cubic centimetres of potassium permanganate to oxidize the oxalic acid; after exposure less was required, the difference being expressed as a percentage of 15·9. Bright days only were chosen. The dish was exposed twice daily, from 11 a.m. to 12 midday and from 12 midday to 1 p.m. At intervals a series of readings were made throughout the day from 9 a.m. to 5 p.m.

In Table I there is set out the monthly average of the percentage decomposition of oxalic acid during the hour 11 a.m. to 12 midday, together with the maximum and minimum and the number of clear days.

TABLE I.

Year and Month.	Average.	Number of Readings.	Maximum.	Minimum.	Clear Days.
1931—					
December ..	20·5	8	21·4	9·25	7–8
1932—					
January ..	16·4	5	18·6	10·5	4–5
February ..	20·2	1	—	—	—
March ..	13·4	5	15·0	10·8	5–5
April ..	9·4	5	10·3	7·2	4–5
May ..	7·6	13	9·6	2·4	4–13
June ..	6·0	10	6·9	3·4	8–10
July ..	7·1	13	9·4	5·0	12–13
August ..	9·0	14	11·0	7·5	14–14
September ..	11·2	10	14·7	8·6	8–10
October ..	14·4	13	18·2	4·4	12–13
November ..	18·1	15	22·0	13·8	14–15
December ..	19·4	9	21·6	10·3	8–9
1933—					
January ..	21·0	5	22·6	18·5	4–5
February ..	18·8	11	21·1	11·6	10–11
March ..	17·0	11	19·5	12·0	9–11
April ..	11·2	3	12·6	10·3	3–3
May ..	7·5	6	9·4	5·6	6–6

The maximum and minimum monthly averages are shown in Chart I and the daily variations in Chart II.

It is of interest to note the extreme variations in the amount of the ultra-violet component on different days, even in midsummer. As will be seen from Chart II, there is more ultra-violet light on a bright day in midwinter than upon a "dull" day in midsummer.

In Chart III a comparison is drawn between the ultra-violet component in Sydney and that found in several other towns, where observations have been made by the same method as employed in these readings. The tremendous midsummer-midwinter

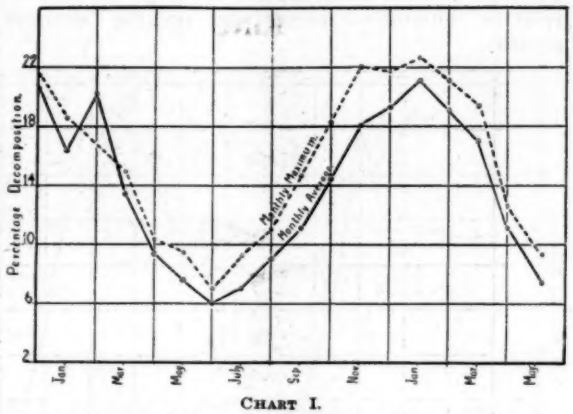


CHART I.

The mean monthly maximum and monthly average of ultra-violet light in Sydney throughout the year.

variations occurring in Sydney compared with other towns, most of which are much closer to the equator, is the most outstanding feature of this graph. Honolulu seems to follow Sydney much more closely than the other towns.

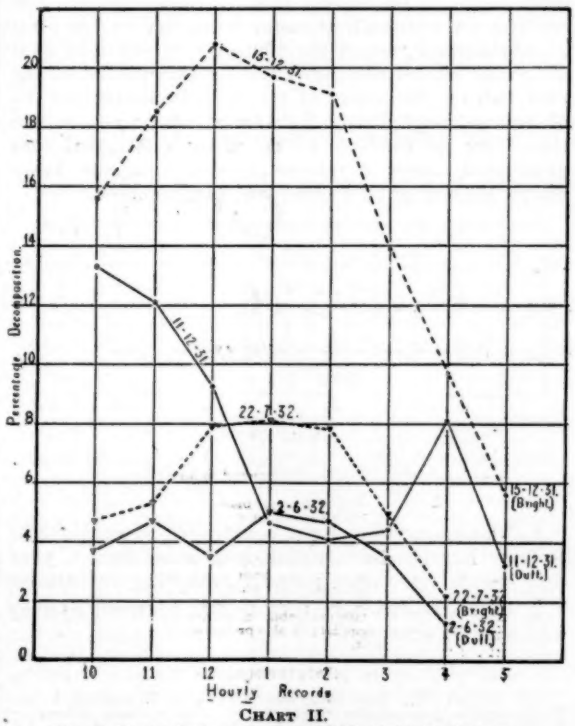


CHART II.

The daily variation of ultra-violet light in Sydney.

In Chart IV the percentage decomposition of the 10% oxalic acid (Sydney figures) is placed on the same graph as the monthly mean relative humidities

(saturation = 100).[5] This shows that the ultra-violet light varies inversely as the relative humidity. An attempt was made to correlate the results for Townsville with the humidity, but there the highest relative humidity occurs during the summer months.

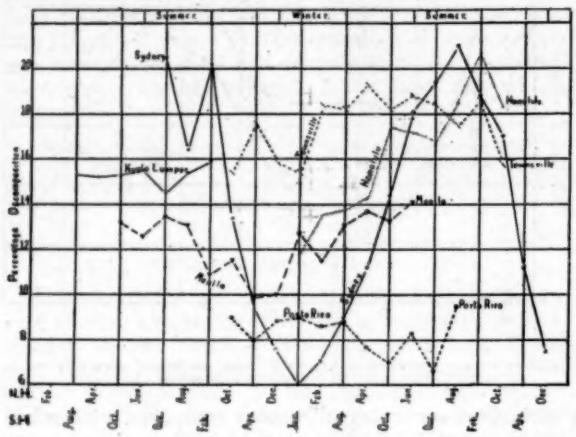


CHART III.

The ultra-violet light component of sunlight in Sydney compared with that prevailing in other cities.

It is now universally recognized that ultra-violet light plays an important part in therapeutics. The extreme variations that occur from day to day even in midsummer reduce the efficiency of sunlight as a source of ultra-violet light during this period of the year, whilst the value of sunlight in midwinter is, of course, negligible. For those who wish to use this form of therapy in carefully controlled and graduated doses a quartz mercury vapour lamp would appear to be a more constant source.

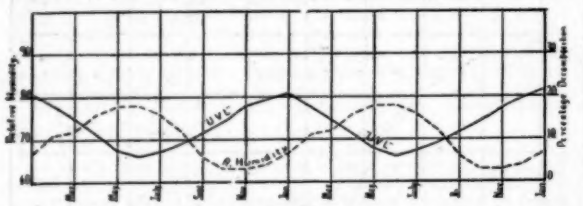


CHART IV.

The ultra-violet light component placed on the same graph as the relative humidity in Sydney.

Summary.

1. The ultra-violet light component of sunlight in Sydney has been measured over more than a year and graphs have been prepared showing variations.

2. Comparisons have been drawn between Sydney and several other cities.

References.

(1) J. Clark: "The Zinc Sulphide Method of Measuring Ultra-Violet Radiation and the Results of a Year's Observations on Baltimore Sunshine", *American Journal of Hygiene*, Volume IX, May, 1929, page 646.

(2) L. Hill and A. Eidinow: "Measurement of Ultra-Violet Light by Means of an Acetone Methylene Blue Solution", *The Lancet*, April 12, 1924, page 745.

(3) P. Freer: "The Result of the Past Two Years' Work in the Study of Tropical Sunlight", *Philippine Journal of Science*, B, Tropical Medicine, Volume VII, February, 1912, page 1.

(4) "The Ultra-Violet Component of Sunlight and its Seasonal Variation at Masjid-i-Sulaiman", Medical Report, Anglo-Persian Oil Company, Limited, 1930, page 60.

(5) "Meteorological Data for Certain Australian Localities", Commonwealth of Australia, Council for Scientific and Industrial Research, Melbourne, Pamphlet Number 42, 1933.

Reports of Cases.

A CASE OF BLACKWATER FEVER SHOWING INTERMITTENT HÆMOGLOBINURIA.

By CARL E. M. GUNTHER, M.B., B.S., D.T.M. (Sydney),
Bulolo, Territory of New Guinea.

IN addition to this clearly defined case the writer has brief notes of a previous case which showed irregularity in the intensity of hæmoglobinuria, with one definite intermission, but, unfortunately, sufficient records on which to base an analysis on the following lines were not kept.

The patient was a male, aged thirty-six years. He has lived for seven years in New Guinea. Five years ago, during an attack of malaria, under treatment with quinine, he passed two lots of blood-stained urine; the quinine was discontinued and no further blood was passed. He has since had many attacks of malaria, treated with quinine, without hæmaturia.

On April 11, 1935, at 2 a.m., he developed an ordinary malarial attack, with a mild rigor, and commenced taking quinine bihydrochloride, 0·3 gramme (five grains), every four hours.

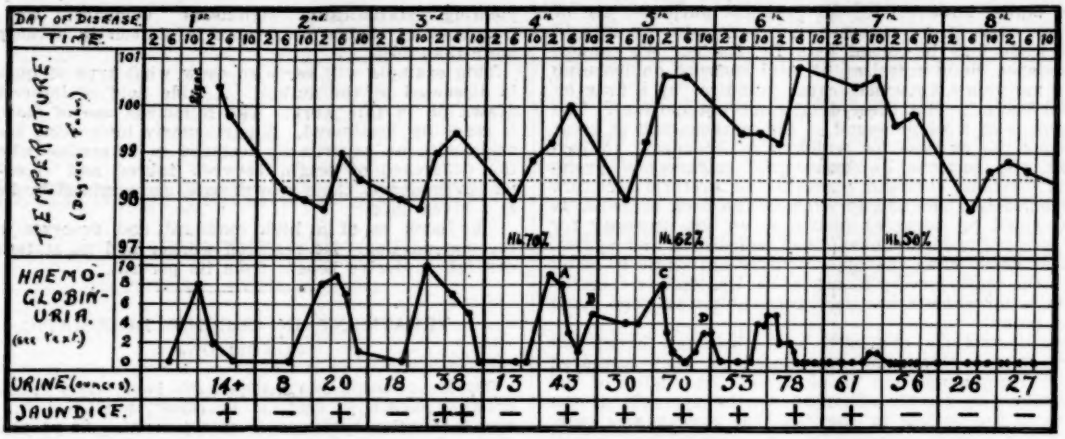
On April 13, 1935, he had a short but severe rigor at twelve noon and then passed a few ounces of blood-stained urine. The quinine was immediately discontinued; he was admitted to hospital at 4 p.m. On admission his temperature was 38·0° C. (100·4° F.); his pulse rate was 90. The liver and spleen were tender and slightly enlarged. He complained of feeling very tired, but was not seriously prostrated. There was a faint jaundiced tint of his skin and conjunctivæ. No parasites were found. The Van den Bergh test gave a positive reaction of the delayed direct type.

The graph shows the progress of the case. The pulse rate is not included; it varied from 72 to 90, corresponding with the temperature. The scale for recording the intensity of the hæmoglobinuria is an arbitrary one. One-ounce samples of all specimens were kept and compared later; the darkest was recorded as 10, the specimens giving no reaction to the guaiac test were recorded as 0, and the others were graded in between.

Treatment comprised copious fluids, barley water, plain water and a minimum of three pints of bicarbonate of soda solution (30 grains to the pint) during twenty-four hours. "Atebrin", 0·09 gramme (one and a half grains), was given three times a day, and liver extract, 4·0 grammes (one drachm), three times a day. Light diet was ordered. On the seventh day after the temperature had subsided quinine bihydrochloride was commenced on successive days as follows: One dose of 0·03 gramme (half a grain), two doses of 0·03 gramme (half a grain), two doses of 0·06 gramme (one grain), one dose of 0·3 gramme (five grains), two doses of 0·3 gramme (five grains), three doses of 0·3 gramme (five grains). This last was continued for seven days and then the daily prophylactic dose of 0·3 gramme (five grains) was resumed. No hæmoglobinuria appeared during this course, nor has the patient had any malarial attack or any hæmoglobinuria during the succeeding three months.

Comment.

The daily figures will be seen to have a constant relationship. In the mornings the temperature was normal, there was no jaundice and no hæmoglobinuria. At about



midday blood-stained urine would be passed, the temperature would commence to rise, and jaundice would appear. (From the fourth to the seventh day the skin was stained yellow by the "Atebrin" and the periodicity of the jaundice was masked.) Between midnight and 6 a.m. these signs would all have subsided.

At first the hæmoglobinuria showed a sharp peak, which gradually became wider, until on the fourth day it separated into two peaks, the higher (A) at midday, the lower (B) toward midnight. On the fifth day these peaks were completely separated (C and D), and on the sixth day the second peak did not appear. From the third day each pair of peaks became successively lower. The liver and spleen ceased to be palpable or tender from the third day.

Reviews.

A GENERAL PRACTITIONER'S AGGRESSION.

UNDER the unusual title of "Aggressive Medicine" Dr. Maberly has written a book in which he sets forth the virtues of three substances in the treatment of a large variety of complaints.[1] In an introductory chapter he explains that he has spent a long life in general practice endeavouring to make the best use of known drugs and to discover new and better ones. The drugs whose value he lauds are iodized tincture of guaiacol, tincture guaiacol-chlor-iodide and *Monsonia Ovata* and *Biflora*. These he considers under the class of substances known as internal antiseptics or therapeutic agents which, when introduced into the system, raise natural resistance or produce conditions inimical to an invading microorganism or its toxin. He claims to have demonstrated that iodized tincture of guaiacol in certain fluids and tissues is inimical to the growth of a large variety of microorganisms; that tincture guaiacol-chlor-iodide is antagonistic to Gram-positive cocci, staphylococci, streptococci and pneumococci. *Monsonia* is claimed as an effective internal antiseptic in affections due to Gram-negative bacilli, especially the enteric group. Succeeding chapters describe in some detail the use of these drugs in a wide variety of conditions such as septic states, asthma and some diseases of the lungs and pleura, endocarditis and blood dyscrasias, diseases of the central nervous system, *Bacillus coli* and enteric infection, rheumatic disease, high blood pressure *et cetera*.

As regards the drugs described there is nothing new. Various combinations of guaiacol have been in use for a long time, especially in tuberculous and rheumatic conditions, and have been claimed to be of value. The use of iodine and chlorine is not new, though their combination with guaiacol is less well known and has been little used. *Monsonia*, a variety of Cape geranium, has been used as a native remedy for dysentery and good results have been claimed.

It is pleasing to see the general practitioner coming into the field and describing his clinical experiences. But to the critical mind the recital of successes claimed hardly carries conviction. The clinical records are by no means complete; the number of cases has been small; there have been no controls; bacteriological investigations are scarcely mentioned in the case records. Though the book is well produced, it can scarcely be described as a valuable addition to medical literature or as one likely to carry any appeal to the average reader. In the last chapter the author records the results of the administration of a mixture on two occasions to abort a common cold!

[1] "Aggressive Medicine", by J. Maberly, M.R.C.S., L.R.C.P.; 1935. London: Baillière, Tindall and Cox. Demy 8vo, pp. 240. Price: 10s. 6d. net.

UROLOGY FOR THE GENERAL PRACTITIONER.

THE most recent addition to the "General Practice Series" of publications is one on the subject of urology, by Alex. E. Roche.[1] This book deals with urology in so far as it concerns the general practitioner, and its general arrangement is excellent. The initial chapter is concerned with the investigation of a urological case, the next four with the significance of various urological symptoms, and the remainder with a systematic consideration, in detail, which is in most cases sufficient, of the affections of the various parts of the urinary tract. In the final chapter the author discusses recent advances in urological treatment.

The author states in his preface that he has discussed at length certain conditions which receive scanty or no mention in most text-books, while others have been dealt with briefly, since they are generally well recognized. In a few instances this has been overdone. Three pages (one occupied by a full-page illustration) is far too little space for any useful consideration of renal tuberculosis, which is not "generally well recognized" and is often treated expectantly for far too long. Again, well over one-quarter of the book is devoted to affections of the spermatic cord and testicle, the splendid presentation of which does not alter this disproportion. More space could with advantage have been given to the section on investigation, and some consideration could have been given to such subjects as acute and chronic prostatitis, prostatic abscess, contracture of the female urethra, urethral caruncle and trigonitis. A more serious fault is the total omission of any reference to injuries of the urinary tract.

[1] "Urology in General Practice", by A. E. Roche, M.A., M.D., M.Ch., F.R.C.S.; 1935. London: H. K. Lewis and Company, Limited. Demy 8vo, pp. 366, with illustrations. Price: 17s. 6d. net.

The faults, however, for all practical purposes, are of omission only, if we except a few very minor points in which issue may be joined with Dr. Roche. We cannot, for instance, deny a feeling of mild surprise on learning that a movable kidney may cause jaundice "by a drag on the duodenum". But these details are unimportant. The teaching is as a whole sound in the extreme, and of great value for the purpose for which it is intended. In particular, the sections on hæmaturia, intravenous pyelography, cystitis, enlarged prostate and urethral stricture are splendidly done, and throughout the book there is, as there should be, repeated insistence on the necessity for early investigation of unexplained hæmaturia and pyuria. In these days, when the ideal urinary antiseptic is being put on the market every month or so, Dr. Roche's remarks on the latter subject are very refreshing and very much to the point.

The illustrations are good and adequate, though we prefer to see skiagrams reproduced as they appeared in the original, and not as positives. The value of the illustrations is greatly enhanced by the synopsis of the history of the patient in question that accompanies each. Lastly, the book is exceptionally easy to read, and a very pleasing feature, often lacking in medical publications, is the author's obvious and consistent consideration for the patient's point of view.

We commend this book most highly, as the omissions we have mentioned do not affect the value or the admirable presentation of the information that it contains.

EXPERIMENTS AND THEIR DESIGN.

"THE DESIGN OF EXPERIMENTS", by R. A. Fisher, D.Sc., F.R.S., is a fitting sequel to the author's "Statistical Methods for Research Workers", which has already won for itself a permanent place in the library of experimenters.[1]

A thorough grasp of simple and standardized statistical procedures is essential to an understanding of the principles that underlie experimental methods. The design supplies the machinery by which results of experimentation may be unambiguously interpreted. Simple problems are given in the present book which illustrate the principles by which research seeks to advance knowledge.

The following experiment is proposed as an example early in the book. A woman declares that by tasting a cup of tea made with milk she can discriminate whether the milk or the tea infusion was first added to the cup. An experiment is designed by which this assertion can be tested. This consists in mixing eight cups of tea, four in one way and four in the other, and presenting them to the subject for judgement in a random order. The subject has been told in advance of what the test will consist. To see whether the experimental design is appropriate it is necessary to be able to interpret unambiguously the possible result of the test. There are seventy ways of choosing a group of four objects out of eight. At best, then, the subject can judge rightly with every cup; since she knows that there are four of each kind, this amounts to choosing, out of the seventy sets of four which might be chosen, that particular one which is correct. A subject devoid of any faculty of discrimination of the type claimed by the woman in question would in fact divide the eight cups correctly into two sets of four in one trial out of seventy or, expressed more properly, with a frequency which would approach one in seventy more and more nearly the more often the test is repeated.

It is open to the experimenter to fix within wide or narrow limits the probability which he would require before he would be willing to admit that his observations have demonstrated a positive result. It is usual for experimenters to take 5% as a standard level of significance, that is, they ignore all results which fall short of this standard. In the example quoted above three successes and one failure, although appearing to show a bias in the right direction, could not be regarded as yielding statistically significant evidence, for its frequency of chance occurrence is sixteen in seventy, or more than 20%.

This example will serve to show what type of question is discussed by the author. A wide field of interests is drawn on in this work. The fallacious use of statistics is carefully considered. A particularly interesting section deals with an experiment designed to determine whether the difference of origin between inbred and cross-bred plants influences their growth rate, as measured by height at a given date.

The book is of a high standard and deserves every recommendation. No research worker and no statistician can fail to derive benefit from its perusal.

[1] "The Design of Experiments", by R. A. Fisher, Sc.D., F.R.S.; 1935. Edinburgh: Oliver and Boyd. Demy 8vo, pp. 262. Price: 12s. 6d. net.

TREATMENT IN CHRONIC RHEUMATIC CONDITIONS.

THE first edition of Dr. Copeman's book, "The Treatment of Rheumatism in General Practice", published in 1933, was favourably reviewed in this journal. As prophesied, the book was an immediate success and a second edition was printed within a few months.[1] This retains all the features so likely to make it attractive to the general practitioner in search of sound guidance in the treatment of his rheumatic patients. Some of the chapters have been rewritten and new matter has been incorporated. The use of gold salts in certain cases of rheumatoid arthritis receives favourable comment, progress being checked by periodical estimations of the blood sedimentation rate. Histamine has been used, either by injection or by ionization, with considerable benefit in cases associated with vasomotor symptoms. Treatment by bee venom has not been impressive, but calcium therapy appears to be useful when the more acute stages are passed. In association with vitamin *D* it aids in recalcification. This is a practical book which will appeal to every practitioner called upon to treat rheumatic conditions.

IDEAL BIRTH.

"IDEAL BIRTH", with a sub-title, "How to Get the Finest Children", is one of a series of works written by Dr. Tr. H. Van de Velde.[2]

Far too many books are written, and this is one that should have been left unwritten. It is not meant as a scientific treatise on the subject, but as a pseudo-scientific presentation to the general reader of the facts known about birth.

The book opens with a semi-mystical dedication concerning Mother Mary—in which, it may be mentioned, no verb occurs in two long sentences—and after 287 pages describing in almost every detail pre-natal hygiene, parturition and the puerperium, it ends with a eulogium on love.

The only thing of value to medical men in the whole book is a chapter on the arbitrary determination of sex, but the facts and theories therein related will be well known to all gynæcologists.

The book is not suitable for general readers, as it goes into far too much detail and would only deceive any who did read it into thinking that they had learned something about the matters dealt with. The author further treads on dangerous ground when he declares his belief in telepathy and clairvoyance. His account of these psychic phenomena and the possibility of the embryo being influenced by such means is only calculated to alarm the minds of both fathers and mothers who might read this work.

[1] "The Treatment of Rheumatism in General Practice", by W. S. C. Copeman, M.A., M.B., B.Ch., M.R.C.P., with foreword by W. Hale-White, K.B.E., M.D., F.R.C.P., Hon. LL.D.; Second Edition; 1935. London: Edward Arnold. Demy 8vo, pp. 236. Price: 9s. net.

[2] "Ideal Birth: How to Get the Finest Children", by Th. H. Van de Velde, M.D.; 1935. London: William Heinemann (Medical Books) Limited. Demy 8vo, pp. 310. Price: 10s. 6d. net.

The Medical Journal of Australia

SATURDAY, APRIL 18, 1936.

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THE INSULIN TREATMENT OF DIABETES.

When the Toronto workers discovered insulin they gave to the medical profession a means of dealing with one of the most lethal and hopeless of diseases. Diabetes was recognized as a disease of the islands of Langerhans, and the insulin injected into the body took the place of the insulin formerly secreted by the island cells. The life of the diabetic became, as it were, mirrored in his blood sugar curve and he had to travel along a road that avoided hyperglycæmia on the one hand and hypoglycæmia on the other. That very many have travelled without disaster is, of course, well known, but it is well to remember that there is a great difference between the injection into the body of a substance that it needs and the secretion of that substance within the body just when it is needed. At the best, any method of injection is only a poor imitation of Nature's mechanism. Disturbances take place. Some persons seem to be more susceptible to insulin than others, and this has been discussed recently in the literature; but many of the variations in response occur because insulin is absorbed into the blood very quickly after injection. Attempts have been made to retard the rate of absorption; in other words, to imitate the process of Nature. These have included the injection of insulin as a suspension or emulsion in oil or similar substances and its injection with vasoconstrictor substances. Attempts have also been made to find an insulin compound which on injection is sparingly soluble in tissue fluid. H. C. Hagedorn and others, working at Steno Memorial Hospital, Copenhagen, have been working for several years at the last-mentioned method and have reported results that have been described as the most valuable work in diabetes since the original discovery of insulin by the Toronto group of workers.[1]

The Copenhagen workers had no success until they found that a compound of insulin and nucleic acid had a more acid iso-electric zone than insulin itself. From this it appeared that it might be possible to combine insulin with some basic group, so that the iso-electric zone of the combination might be nearer to the pH of the tissue than that of insulin hydrochloride. Among the substances investigated were the protamines. The protamines are divided into three groups: monoprotamines, diprotamines and triprotamines, according to their contents of one, two or three of the basic constituents, lysine, arginine and histidine. Hagedorn and his co-workers have so far concentrated chiefly on the monoprotamines, and latterly they have used only a new protamine that is obtained from the sperm of *Salmo irideus*. The reaction of the protamine insulinate is adjusted before injection to pH 7·3 and by this means the protamine insulinate is precipitated. Since the compound is injected as a suspension, the deposit in the subcutaneous tissue consists of a fluid of practically constant insulin concentration and a steadily diminishing amount of solid particles. In this way a distinct prolongation of the time of absorption takes place. During more than two years Hagedorn and his fellow workers have treated with protamine insulinate eighty-five patients suffering from diabetes. The

[1] *The Journal of the American Medical Association*, January 18, 1936.

patients represented all age classes and cases of every degree of gravity. The blood sugar of each patient was examined five times during his stay in hospital; the daily sugar excretion was also determined. The patients received an average diet of 2,300 calories. The diet contained about one hundred grammes of carbohydrate and seventy grammes of protein; of the carbohydrates, 40% were given at breakfast, 40% were given at luncheon and 20% at dinner. The effect of the protamine insulinate was judged by comparing periods in which the patients were treated with ordinary insulin with periods in which they were treated with protamine insulinate. It was found that with the protamine insulinate the blood sugar fluctuations were much diminished (the blood sugar curve lost its sharp peaks); and the effect lasted about twice as long as that of ordinary insulin. Moreover, glycosuria was reduced or suppressed, ammonia excretion was reduced, and there was less risk of the occurrence of hypoglycæmia. No ill-effects have been noted, there is no local effect and the effect is the same whether the patients stay in bed or are out of bed. The effect is the same in children as in grown-up persons. Particularly when protamine insulinate is given in the evenings is it found to obviate the risk of the occurrence of hypoglycæmia during sleep.

Concurrently with this important announcement by Hagedorn and his fellow workers comes a corroborative report from a group of investigators headed by H. F. Root and working in Joslin's clinic at Boston.[1] Two members of this group have worked with Hagedorn in Copenhagen. Hagedorn gave them sufficient material for trial with their own patients. There is no need to traverse their findings in the fifteen patients treated by them; it will suffice to state that they tally with those of the Copenhagen group. They emphasize that the substance is only in its experimental stage; and in this regard it is well to note that Hagedorn and his fellow workers refer to their treatment as "clinical experiments". They point out also that the compound is not definitely stable—the protamine must be added to the insulin only as it is needed for use within the ensuing days or few weeks. They show that protamine insulinate may not be satisfactory in diabetic emergencies, and they suggest that diabetics should be given regular insulin in the morning and the new preparation in the evening.

Though this work has been going on for two years or more, it is more than likely that further discoveries will be made. Hagedorn is reported to be at work trying to elaborate a compound that combines the advantages of both old and new insulin; he also states that he is carrying out a study on combinations of triprotamines and insulin. It is a question of the solubility in the tissues of a substance in which insulin acts as the acid—in the old preparation insulin is the base. The attempts to elaborate a suitable substance are of additional interest at the moment, in view of what is being written on variations in susceptibility to insulin. While the work that is being done is of the greatest value in treatment of diabetics, it is not unlikely that in due course it will throw further light on the nature of diabetes itself.

[1] *The Journal of the American Medical Association*, January 18, 1936.

Current Comment.

PATHOLOGICAL CHANGES IN ASTHMATIC INFANTS.

In young infants death from asthma is excessively rare. Robert Hutchison has said that immediate attacks are rarely dangerous during early life; and many pædiatricians have drawn attention to the striking tendency which many children show to become free of all liability to asthmatic attacks before they reach the age of puberty. George L. Waldbott[1] points out that among cases of asthma in which autopsy is performed, children and infants are very rarely included. During a period of five years the Children's Hospital of Michigan reported only one death from asthma in 819 autopsies; at the Children's Memorial Hospital (Chicago) no death has been reported as due to asthma since 1922; in children below the age of ten years no deaths from asthma are to be found amongst the records of 4,000 *post mortem* examinations conducted at the University of Michigan during the past forty years.

[1] *American Journal of Diseases of Children*, June, 1935.

The figures collected by life insurance companies seem to show that death from asthma occurs most commonly amongst patients who have suffered from the disease for relatively short periods of time. One might therefore expect the disease to be fatal more commonly among infants and young children than in adults, but that in infants and children the pathological appearances might bear a different aspect to those found during later life.

The asthmatic attacks of infants are clinically very different from those of adults. They are commonly very severe and accompanied by great shock and the flaring-up of cutaneous lesions. Vomiting, diarrhœa and laryngeal stridor are features of such attacks. The patient's temperature is raised and the whole clinical picture calls to mind the syndrome of allergic shock and the condition of allergic reaction following the invasion of an antigen. The phenomena are better seen when weeks or months elapse between attacks; when the spasms occur at short intervals, the clinical appearances have more likeness to those of adults.

Waldbott has studied two cases of infantile asthma in which death occurred. The elder of the two infants was six months old, the younger half that age. One child had an allergic family history, while the other showed sensitization to orange juice and suffered from eczema. In the first case the duration of the disease was three weeks, and in the second six weeks. The two infants provided the only clinical material available to Waldbott at the time of his investigation.

Post mortem examination has convinced this observer that clearly defined pathological differences exist in the lungs of young children dying from asthma as compared with those of adults. In the latter the presence of infection is invariable and is manifested by leucocytic infiltration of the bronchial walls. In the very young this infiltration is slight, and eosinophile cells are rare or absent; but large lymphocytic aggregations are to be found in the lungs and elsewhere. There is, in the infant, no hypertrophic change in the muscular layers of the juvenile bronchi or any increase in the thickness of the basement membrane; these changes, together with great increase in the amount of bronchial mucus, are characteristic of the asthmatic adult.

In infantile asthma the alveolar capillaries manifest grave congestive changes, accompanied by bloody and œdematous extravasation, and are unmistakably suggestive of an allergic catastrophe. Similar changes are to be found in other regions; they have not only been seen through the bronchoscope, but have been discovered in the sinuses, the skin and the gastro-intestinal tract.

In asthmatic adults death is said to follow obstruction of the bronchi by accumulation of thick mucus; but in the infant, Waldbott states, the end comes as the result of pulmonary œdema caused by dysfunction of the permeable alveolar capillaries, and the whole picture suggests the termination of life, as observed in adult man and in dogs, from anaphylactic shock. It may well be that the mature asthmatic, acquiring in the course of years an ability to combat, more or less effectively, the sudden onslaught of an antigen, develops an incomplete protection which is not present in the tender babe. It may be, too, that pulmonary emphysema, by causing a stretching of alveolar surfaces, and so a lessened permeability, delays the absorption of inspired antigen, and that bronchial spasm even aids the expulsion of deleterious substances from the pulmonary fields. The young child, one may assume, has not had opportunity to forge these protective weapons and so more readily succumbs to a too massive dose of some antigen to which he is hypersensitive.

Readers of the relevant sections of such a work as Osler's "Modern Medicine" might justifiably entertain the belief that there exists a great likeness between the condition known as "thymic death" and the state of allergic shock; and Waldbott has published the news that among 34 cases of sudden death in patients with widespread lymphoid excess, in no case were pulmonary œdema, bloody alveolar extravasation, necrosis and alternating areas of emphysema and atelectasis absent; in no case were those pathological signs absent which are discoverable in fatal cases of shock following the injection of horse serum. If, as some writers maintain, the clinical picture of the so-called "thymic constitution" is not to be distinguished from that of the allergic diathesis and thymic death is in reality an allergic death, it is not unfair to suppose that deaths due to asthma (or allergy) are more common in infants than many have hitherto imagined. Waldbott's contentions are, then, that not only is asthma in its early juvenile form a blood brother to the conditions of anaphylactic shock and of thymic death, but that in the search for the enlarged thymus (not seldom absent) associated with the last condition, the pathological findings detailed above may be altogether missed. Statistics would seem to prove that thymic death is commoner far amongst infants than death from asthma or allergic shock; but on the pathological evidence here discussed it is not unlikely that the two former conditions may sometimes be, in early childhood, the equivalent of a fatal attack of asthma.

It is known by those interested in such topics that Waldbott is an observer whose scientific standing is deservedly high, yet some of his American colleagues have shown disinclination to accept in their entirety his views on allergy and allied subjects. Few investigators are found who are bold enough to enunciate a theory after the study of one or two cases of any given disease; yet this authority has such keen powers of observation and so sound a background of pathological lore that he is unlikely to arrive at conclusions by means of inductions not sufficiently copious, nor to confound exceptions with rules, or accidents with essential properties.

Abstracts from Current Medical Literature.

SURGERY.

The Free Transplantation of Skin.

Eugene B. Potter (*Surgery, Gynecology and Obstetrics*, December, 1935) attempts an evaluation of the methods of skin grafting in common use. Attempts at transplanting pedicled flaps of skin were made by the ancients. Reverdin was the first to popularize transplants of small pieces of epidermis and corium. His attempts were made before the days of antisepsis. This method is of use when donor areas are restricted. Nowadays these grafts are generally used for extensive burns in children. As portion of the corium is present in the centre of the Reverdin pinch graft, the final appearance is mottled and uneven. In the presence of a tendency toward a keloid formation these grafts are unsatisfactory. In 1886 Thiersch reported a method of grafting in which large sheets of partial thickness of skin, including a portion of the corium, were employed. This method has been very popular up to recent years. Large areas may be covered in one operation with a fair expectancy of adhesion occurring. Spontaneous regeneration occurs at the donor site, providing subcutaneous fat has not been exposed. However, contraction of the graft does occur, because of the small amount of corium included with the graft. Wolfe, of Glasgow, first used the full thickness skin graft in 1875; this graft includes the full thickness of skin freed from fat. Contracture is reduced to a minimum by this method. The base used for the graft must be uninfected. Meticulous care is necessary in applying the graft, with regard to tension, pressure and escape of serum. Tunnel grafts were popularized about the time of the Great War. They have the same disadvantages as the Wolfe graft, and a very restricted field of usefulness. More recently Blair and Brown have employed a thick split graft which includes most of the corium. Larger individual grafts are used. A special suction retractor and a specially constructed knife, elaborated in 1929, enable large uniform grafts to be made. Up to twenty-five to fifty square inches may be cut from suitable areas. From one-third to three-quarters of the thickness of the corium is included with the epidermis. As a rule, hairs and glands are retained in the graft. The author remarks on the repeated healing of such extensive donor areas. If the subcutaneous fat is undamaged, regeneration will occur within ten days. Regeneration occurs undoubtedly from hair follicles and sebaceous glands remaining in the donor area. If correctly applied, these grafts leave only a linear junction line. To insure success with this method, a sharp knife and some degree of manual dexterity are essential.

Tissue Diagnosis During Operation.

C. Alexander Hellwig (*Surgery, Gynecology and Obstetrics*, October, 1935) discusses the reliability of Terry's supravital technique in over 1,000 biopsies. Frozen section technique was studied by Wilson as early as 1905. It has been elaborated at the Mayo Clinic during the last twenty-five years and used in more than 28,000 malignant tumours. Bloodgood almost always used the method. Success depends upon familiarity with a given procedure and the experience of the observer. A surgeon's young assistant should never be entrusted with tissue diagnosis by this method; it is preeminently the work of a pathologist. The author used Terry's neutral polychrome methylene blue stain for sections and used the stain only on one side. High and low powers may be employed. The stain is satisfactory for only about six minutes. The sections are cut with a bi-concave razor in a fresh unfrozen condition. The tissue may be cut, stained and examined in less than one minute. No tissue need be wasted, as it may be embedded later for paraffin sections. Diagnosis made by Terry's method on razor sections of 2,000 tissues agreed in 96% with the final diagnosis of the pathologists of the Mayo Clinic. In over 1,000 biopsies malignancy and benignancy have been recognized correctly in 96·6% of the razor sections.

Krukenberg Tumour.

Eric A. Fennel (*The American Journal of Surgery*, November, 1935) discusses so-called *fibrosarcoma ovarii mucocellulare*, which was first described by Krukenberg in 1896. A discussion has centred around whether this tumour originates in the ovary or is metastatic from carcinoma occurring in the alimentary tract. In 1918 Major collected 55 cases, 16 of which were considered by the authors to be primary tumours of the ovary, while the remaining 39 writers considered the tumours to be metastatic. The author stresses the difficulty of concluding a metastatic origin for the tumour. His patient was a *nullipara*, aged fifty-eight years. A large ovarian cyst was removed at operation; the basal portion of the tumour was solid and showed the characteristic appearance of a Krukenberg tumour. One year later, when the lower part of the abdomen was explored for a volvulus of the intestine, the remaining ovary and all other viscera appeared normal. Four and a half months later uterine bleeding occurred and curettage disclosed the presence of carcinoma having large mucoid cells. Radium was applied with relief of symptoms. Six weeks later the patient experienced epigastric pain and tenderness. Gastro-intestinal X ray examination revealed no evidence of pathological change. Four months later a gastroscope was passed and revealed no abnormalities of the mucosa. Further X ray examination at the end of two months still failed to reveal any abnormality of the alimentary tract. Persistent epigastric pain led to laparotomy somewhat over two years from the onset of the ovarian symptoms. At this operation a large fungating carcinoma was found on the greater curvature of the stomach. The author considers that the radium which was inserted for the uterine bleeding may have stimulated the growth of the gastric carcinoma. Although the stomach was under suspicion for over two years, X ray investigation by various radiologists failed to discover evidence of gastric carcinoma. Even on the greater curvature, which is most easily seen with the gastroscope, a fungating carcinoma was not discovered by a competent observer.

Acute Intramammary Abscess.

R. J. V. Battle and G. N. Bailey (*The British Journal of Surgery*, January, 1936) discuss acute intramammary abscesses and describe a method of aspirating them and washing them out with Dakin's solution. This method has the advantage that it can be carried out single-handed, without skilled assistance, under local anæsthesia and without subsequent scarring. It is to be preferred in those cases of suppuration occurring in the non-lactating breast and in those cases in which, during lactation, the abscess is relatively localized and confined to one lobe. With the very large and neglected breast abscess incision immediately relieves an already prolonged toxæmia and drains a large cavity more satisfactorily than can aspiration. With the diffuse cellulitic type of infection the prognosis is poor, however the condition is treated; incision is probably to be preferred, in that by this means the local condition can be explored with the finger and infected areas can be broken down into one large abscess cavity.

Obstruction of the Large Bowel.

L. Sperling (*Archives of Surgery*, January, 1936) records the results of an investigation of the relationship of the ileo-caecal sphincter to large bowel obstruction. He shows that this sphincter is competent to withstand pressures within physiological limits (pressures of from ten to fifty centimetres of water) which conceivably might occur in the course of obstruction of the large bowel, and therefore to convert a simple type of obstruction into a closed loop, with all the inherent dangers of strangula-

tion due to increased intraenteric pressure. Experimental evidence shows that the effect of sustained increased pressures is the development of areas of hæmorrhagic necrosis in the colon of the dog, and, from a perusal of the literature and from case reports, it is evident that similar changes occur in the human colon. This ileo-caecal sphincter is subject to definite nervous control and its competency depends on the tonicity of the fibres of the sphincter. The tone of the sphincter is increased by stimulation of the sympathetic nerves; and stimulation of the distal part of the colon may increase the resistance of the sphincter to back pressure to approximately three times that of the normal sphincter; while stimulation of the parietal peritoneum, the stomach or the small bowel has no such effect. It is conceivable that the resistance of the ileo-caecal sphincter is greatly increased in cases of intrinsic pathological lesions of the colon. Stimulation of the distal portion of the colon, acting through Auerbach's plexus, increases the tone of the ileo-caecal sphincter, making it more competent. The paper also includes some details of experimental work and case records.

Thyreoidectomy for Heart Disease.

R. J. CLARK, J. H. MEANS AND H. B. SPRAGUE (*New England Journal of Medicine*, February, 1936) record the results of total ablation of the thyreoid gland in twenty-one cardiac patients, of whom nineteen had congestive failure and two had *angina pectoris*. In about one-fourth of the entire series the operation was considered worth while, and the relatively poor results are ascribed to the difficulty in selection of cases and to the fact that patients who were too ill were originally chosen. Though the contraindications to the operation are numerous, if patients are well selected and handled, it is considered that worth-while results are obtained, at least temporarily, in 50% of cases. Avoidance of the grosser manifestations of myxœdema has not been found difficult, small daily rations of thyreoid usually accomplishing this purpose.

Elliott Treatment of Pelvic Inflammatory Disease.

R. FALLAS (*Western Journal of Surgery, Obstetrics and Gynecology*, February, 1936) describes the Elliott form of treatment of pelvic inflammatory disease and discusses the indications for its use. He points out that its greatest usefulness lies in the treatment of the acute and subacute inflammations and that its unconsidered general use in the treatment of chronic inflammatory conditions, except as a pre-operative or post-operative addition to surgery, may result in harmful procrastination. By the introduction of hot water into a special rubber vaginal bag the treatment aims to elevate the temperature of the adnexal regions, thus producing a hyperæmia of the pelvic organs. A number of successful results are quoted and the details of a subsequent general discussion are appended. Some general conclusions are: that the treatment is indicated in acute pelvic inflammatory disease, whether of *post partum*, post-abortal or specific origin, or in acute exacerbations of chronic inflammatory disease; that in chronic pelvic inflammatory disease, although some degree of improvement results from its use, these results are only palliative and usually inadequate; that in acute gonorrhœa in women it is an improvement over former methods in its safety and rapidity of cure; that in chronic endocervicitis, where cauterization is refused or contraindicated, it is a much more rapid and adequate measure than topical applications and tamponade; that in *Trichomonas vaginalis* vaginitis it is not of value; that in pelvic pain from post-operative oophoritis or from unidentified cause it has given excellent clinical results.

Otogenous Abscess of the Temporal Lobe.

C. B. COURVILLE AND J. M. NIELSEN (*Western Journal of Surgery, Obstetrics and Gynecology*, December, 1935) discuss the pathogenesis of otogenous abscesses of the temporal lobe of the brain in a preliminary report based upon observations in a series of verified cases. It is considered that eight or nine out of ten such abscesses result from extension of infection by contiguity through the *tegmen tympani* or *antri*. In a few cases the route is an indirect one through other portions of the temporal bone, through venous channels or by operative implantation of bacteria in the brain in exploring for a non-existing abscess through an infected area.

Evacuation of the Gall-Bladder in Old Age.

IN the third of a series of statistical analyses Edward A. Boyden (*Surgery, Gynecology and Obstetrics*, January, 1936) reports the results of experiments concerning the emptying of the gall-bladder as visualized by the Graham-Cole technique. The author investigated twenty-four patients between the ages of sixty and seventy-eight years. On the evening preceding examination 3·5 grammes of "Iodeikon" were administered by mouth and X ray examinations were made at short intervals after the subject drank an eggnog. The decrease of contraction of the gall-bladder was observed and measured on radiograms and curves were plotted for varying ages and for both sexes. The results seemed to indicate that the gall-bladder empties faster in old age than in young adults. The author emphasizes that the old age group comprised selected patients, and in only three-quarters of his patients could the gall-bladder be visualized. He interprets these results as indicating that the motility of the gall-bladder is not diminished in old age, provided that the biliary tract has escaped infection. Old women have a more rapid rate of emptying than old men. He found that 80% of the contents of the female gall-bladder was evacuated thirty minutes after a meal of egg yoke.

Regeneration of the Semilunar Cartilage.

DON KING (*Surgery, Gynecology and Obstetrics*, February, 1936) writes that there is wide divergence of opinion concerning the occurrence of regeneration of the semilunar cartilage after its surgical removal. Robert Jones denied its occurrence; on the other hand, Mandl found complete regeneration after six and eight months. Experimental evidence is conflicting. Certain sheep and rabbits are known to experience regeneration, while in other instances no such evidence has been found. The author, working at the Stanford University School of Medicine, carried out experiments on four dogs. In every instance the extirpated cartilage was replaced by a semilunar disk of firm glistening tissue, which microscopically closely resembled true fibrocartilage.

Spondylitis Ankylopoietica.

F. CAMPBELL GOLDING (*The British Journal of Surgery*, January, 1936) records his clinical, radiographic and pathological findings in a series of ninety patients suffering from spondylitis. The author stresses what he believes to be a characteristic pre-spondylitic symptom. The history showed recurrent attacks of pain of a fibrositic character, recurring for many years, localized to the muscles surrounding joints, sometimes associated with a synovitis of varying intensity. Pains were commonest in the thighs and buttocks. Occasionally the trunk was involved, the commonest complaint being "tightness round the chest". Distal joints were seldom involved. Sciatica was fairly common in the early stages. After a varying period of pain in the limbs, stiffness and pain in the back became noticeable and increased each year. In the early pre-spondylitic period it is common to find radiographic evidence in the sacro-iliac joints. Since calcification of ligaments occurs so slowly, the normal rate of advance of the condition is difficult to estimate. Frequently the disease "appears to wear out", when pains become infrequent and the general health recovers. The author believes that sacro-iliac joint disease of this type is the earliest manifestation of spondylitis and may be present as a useful diagnostic indication for several years before the back is involved.

British Medical Association News.

ANNUAL MEETING.

The annual meeting of the New South Wales Branch of the British Medical Association was held at the Robert H. Todd Assembly Hall, British Medical Association House, 135, Macquarie Street, Sydney, on March 26, Dr. A. M. Davidson, the President, in the chair.

Annual Report of Council.

On the motion of Dr. A. J. Collins, seconded by Dr. G. M. Barron, the annual report of the Council was received. The report is as follows:

The Council presents the following report on the work of the Branch for the year ended March 26, 1936.

Death of His Majesty King George V.

It is with deep regret that the Council has to record the death, on January 20, 1936, of His Majesty King George V, Patron of the Association.

Membership.

The membership of the Branch is now 1,661, as against 1,633 at the date of the last report. The additions have included 77 elections, re-elections and resumptions, and 29 removals into the area of the Branch; while the losses have included 4 by resignation, 28 removals out of the area of the Branch, 32 by default in payment of subscription, and 14 by death. The losses by death were as follows: Dr. R. Rosati, Dr. J. P. Hocken, Dr. F. M. O'Donoghue, Dr. J. H. R. McCutcheon, Dr. G. H. Bennett, Dr. S. H. Hughes, Dr. E. W. Buckley, Dr. P. J. Collins, Dr. Lily Holt-MacCrimmon, Dr. F. S. Booth, Dr. W. L. Davies, Dr. Leila Keatinge, Dr. E. M. Goard, Dr. W. H. Crago.

The Late Dr. William Henry Crago.

The Branch has suffered by the passing of Dr. William Henry Crago. A member of the Branch since 1884 and of the Council since 1889, he was, excepting for the year 1894, when he was President, Honorary Treasurer until his retirement in 1931. He was manager of the *Australasian Medical Gazette* from 1895 until 1914, and from 1913 until 1924 Chairman of Directors of the Australasian Medical Publishing Company, Limited. He played an important part in the arrangements for the building of the Association's House, first in Elizabeth Street and later in Macquarie Street, and he devoted himself unsparingly to the interests of the profession and of the Association.

The Council has placed on record its deep sorrow at his death and its sincere appreciation of the great services he rendered to the Association.

The deep sympathy of the Branch is extended to the family.

The Late Mr. Alfred William Green, O.B.E.

The Branch has also suffered by the passing of an old officer of the Association, Mr. A. W. Green, O.B.E., who for fifty-two years acted as Assistant Honorary Secretary.

The deep sympathy of the Branch is extended to Dr. R. A. R. Green and relatives.

Robert H. Todd Memorial Prize.

The Senate of the University of Sydney has advised the Council that it has approved of the foundation of an annual prize in medical jurisprudence to commemorate the memory of the late Dr. Robert Henry Todd.

Meetings.

Ten ordinary meetings of the Branch (including the annual general meeting) and eight clinical meetings were held. One extraordinary general meeting was held on November 28, 1935, when an addition to the by-laws was made in respect of lecturing in courses of optometry. The average attendance was 46. At the meeting on April 24, Dr. Hilda Bull, Assistant Medical Officer of Health, Melbourne, by invitation of the Council, read a paper: "Immunization in Diphtheria and Scarlet Fever", and at the meeting of December 12, Dr. J. Newman Morris, Chairman of Council, Victorian Branch, by invitation of the Council, delivered an address on "National Health Insurance". Eight of the ordinary meetings were held in conjunction with meetings of sections, namely: April 24, with the Section of Pædiatrics, the Section of Pathology and Bacteriology, and the Section of Hygiene and Preventive Medicine; May 30, with the Section of Anæsthesia, the Section of Surgery and the Section of Oto-Rhino-Laryngology; June 27, with the Section of Neurology and Psychiatry and the Section of Medicine; July 25, with the Section of Orthopædics, the Section of Pædiatrics and the Section of Surgery; August 29, with the Section of Medicine and the Section of Radiology; September 26, with the Section of Oto-Rhino-Laryngology and the Section of Neurology and Psychiatry; October 31, with the Section of Medicine, the Section of Surgery and the Section of Neurology and Psychiatry; November 28, with the Section of Surgery and the Section of Orthopædics. The clinical meetings were held at the Royal Alexandra Hospital for Children, the Royal Prince Alfred Hospital, the Royal North Shore Hospital, Sydney Hospital, Prince Henry Hospital, Saint Vincent's Hospital, the Royal Hospital for Women and Broughton Hall Psychiatric Clinic. The business of the meetings included fifteen papers and addresses and numerous reports of cases, exhibits and demonstrations.

Representatives.

The Branch was represented as follows:

(*a*) Council of the British Medical Association (1935-1936): Professor R. J. A. Berry.

(*b*) Representative Body of the British Medical Association (1935-1936): Dr. A. M. McIntosh.

(*c*) 103rd annual meeting, British Medical Association, Melbourne, 1935: Dr. A. J. Collins and Dr. A. M. Davidson.

(*d*) Federal Council of the British Medical Association in Australia: Dr. J. A. Dick, C.M.G., and Dr. George Bell, O.B.E.

(*e*) Australasian Medical Publishing Company, Limited: Dr. T. W. Lipscomb, Dr. F. P. Sandes, Dr. A. M. Davidson.

(*f*) Metropolitan Hospitals Contribution Fund of New South Wales: Dr. R. V. Graham.

(*g*) St. John Ambulance Association: Dr. A. M. Davidson.

(*h*) Executive Committee of the Council for Mental Hygiene for New South Wales: Dr. C. K. Parkinson and Dr. E. H. M. Stephen.

(*i*) Board of Control of the Campaign against Tuberculosis: Dr. A. S. Walker.

(*j*) Council of the Royal Society for the Welfare of Mothers and Babies: Dr. R. B. Wade and Dr. E. H. M. Stephen.

(*k*) Council of the Bush Nursing Association (1935-1936): Dr. A. M. Davidson.

(*l*) Council of Education: Dr. A. J. Collins.

(*m*) Sixth Australian Cancer Conference: Dr. H. M. Moran.

(*n*) New South Wales Post-Graduate Committee in Medicine: Dr. W. K. Inglis and Dr. L. W. Dunlop.

(*o*) Provisional Committee for the Training of Almoners: Dr. W. Vickers and Dr. A. J. Gibson.

Council.

(*a*) The attendance of members of the Council and of the standing committees was as set out in the accompanying table.

(*b*) The representatives of the Local Associations of Members, appointed on the invitation of the Council to attend the regular quarterly meetings of the Council, were as follows: Dr. T. E. Parker (Canterbury-Bankstown), Dr. A. M. Gledden (City), Dr. J. M. Alcorn (Central Southern), Dr. N. B. Charlton (Central Western), Dr. G. J. Duncan (Eastern Suburbs), Dr. W. F. Simmons (Illawarra Suburbs), Dr. L. Cowlishaw (Kuring-gai District), Dr. A. G. Brydon (Northern District), Dr. L. Fetherston (South-Eastern), Dr. E. A. Tivey (Warringah District), Dr. J. Brooke Moore (Western), Dr. C. E. Vickery (Western Suburbs).

Library.

Dr. J. A. Dick was again appointed to be Honorary Librarian, a position which he has held for thirty years.

Donations of books and periodicals were received from the Australasian Medical Publishing Company, Limited, Dr. S. A. Smith, the library of the late Dr. Wahab McMurray, the Royal Prince Alfred Hospital Medical Officers' Association, Melbourne Permanent Post-Graduate Committee, Dr. W. W. Ingram, Mr. G. V. Rudd, Dr. C. N. Paul, Dr. W. L. Kirkwood, Dr. F. N. Lynch, Department of Public Health, Dr. L. Cowlishaw and Dr. R. J. Silverton. The following additional journals have been purchased: *American Journal of Tuberculosis, British Journal of Tuberculosis, Brain, Journal of Clinical Science incorporating Heart.* A copy of a catalogue of the journals in the library has been forwarded to each member.

Affiliated Local Associations of Members.

Balmain District (affiliated 1913).

Border (affiliated 1908): *Honorary Secretary*, Dr. R. A. Robertson. Membership, 12.

Canterbury-Bankstown (affiliated 1930): *Chairman*, Dr. G. J. Cousins; *Vice-Chairman*, Dr. J. H. D. Edwards; *Honorary Secretary*, Dr. G. Russell. Membership, 24. Four meetings were held.

Central Northern (affiliated 1910): *Chairman*, Dr. A. T. Roberts; *Honorary Secretary*, Dr. F. W. D. Collier. Membership, 69.

Central Southern (affiliated 1909): *Chairman*, Dr. F. A. Burns; *Honorary Secretary*, Dr. R. G. Woods. Membership, 23.

Central Western (affiliated 1910): *Chairman*, Dr. J. Levy; *Vice-Chairman*, Dr. C. R. Cole; *Honorary Secretary*, Dr. K. S. M. Brown. Membership, 50. Two meetings were held.

City (affiliated 1913): *Chairman*, Dr. H. A. Ridler; *Vice-Chairman*, Dr. R. F. Llewellyn; *Honorary Secretary*, Dr. L. R. Flynn. Membership, 19. One meeting was held.

Eastern Suburbs (affiliated 1911): *Chairman*, Dr. J. H. W. Leadley; *Vice-Chairman*, Dr. F. Smidlin; *Honorary Secretary*, Dr. B. W. Stevenson. Membership, 86. Four meetings were held.

Far South Coast and Tablelands (affiliated 1935): *Temporary Secretary*, Dr. L. W. Wing.

Illawarra Suburbs (affiliated 1913): *Chairman*, Dr. R. B. Shute; *Vice-Chairmen*, Dr. S. R. Stafford and Dr. A. L. Watson; *Honorary Secretary*, Dr. P. L. Charlton. Membership, 40. Three meetings were held.

Kuring-gai District (affiliated 1929): *Chairman*, Dr. H. R. Scrivener; *Vice-Chairman*, Dr. N. P. Boulton; *Honorary Secretary*, Dr. F. A. E. Lawes. Membership, 44. Three meetings were held.

North-Eastern (affiliated 1913): *Chairman*, Dr. J. W. Broughton; *Vice-Chairman*, Dr. F. N. Lynch; *Honorary Secretary*, Dr. J. R. Ryan. Membership, 42. Three meetings were held.

Northern District (affiliated 1911): *Chairman*, Dr. W. F. L. Liggins; *Vice-Chairman*, Dr. H. G. D. Cookson; *Honorary Secretary*, Dr. A. G. Brydon. Membership, 64. Three meetings were held.

South-Eastern (affiliated 1914): *Chairman*, Dr. H. H. Lee; *Vice-Chairman*, Dr. W. B. Kerr; *Honorary Secretary*, Dr. L. Fetherston. Membership, 17. Two meetings were held.

South Sydney (affiliated 1909): *Chairman*, Dr. W. F. D. La Touche; *Vice-Chairman*, Dr. W. C. Darragh; *Honorary Secretary*, Dr. C. H. Jaede. Membership, 26. Five meetings were held.

ATTENDANCES AT COUNCIL AND STANDING COMMITTEE MEETINGS

	Council.	Committees				
		Executive and Finance.	Organization and Science.	Medical Politics.	Hospitals.	Ethics.
DR. G. M. BARRON	5	—	—	—	—	5
DR. GEORGE BELL (Hon. Treasurer and Premises Attorney)	5	12	5	9	4	1
DR. C. B. BLACKBURN	3	—	—	—	—	5
DR. K. S. MACARTHUR BROWN	5	—	—	11	3	—
DR. A. J. COLLINS (Past President)	5	10	—	—	—	—
DR. A. M. DAVIDSON (President)	5	12	7	6	4	2
DR. LINDSAY A. DEY	5	—	—	7	—	—
DR. J. A. DICK (Hon. Librarian)	5	10	—	9	—	—
DR. B. T. EDYE	5	—	—	—	—	4
DR. A. J. GIBSON	2	7	—	—	—	—
DR. R. V. GRAHAM	4	—	—	8	3	—
DR. HUGH HUNTER	5	—	—	11	—	—
DR. W. K. INGLIS	5	—	9	—	—	—
DR. C. H. E. LAWES (Hon. Secretary)	4	8	3	4	2	2
DR. R. J. MILLARD	5	—	—	—	—	5
DR. A. A. PALMER	5	—	—	—	—	6
DR. E. H. M. STEPHEN (President Elect)	5	10	6	9	3	6
DR. W. VICKERS	4	9	—	—	4	—
DR. A. S. WALKER	4	—	9	—	3	—
DR. G. C. WILLCOCKS	5	12	8	—	—	—
Meetings held	5	12	9	11	4	6

Southern District (affiliated 1909): *Honorary Secretary*, Dr. C. R. Sim. Membership, 70.

Warringah District (affiliated 1929): *Honorary Secretary*, Dr. E. L. Newman. Membership, 50. Three meetings were held.

Western (affiliated 1908): *Chairman*, Dr. W. Conolly; *Vice-Chairman*, Dr. L. W. Tunley; *Honorary Secretary*, Dr. S. R. Dawes. Membership, 53. Three meetings were held.

Western Suburbs (affiliated 1908): *Chairman*, Dr. C. E. Vickery; *Senior Vice-President*, Dr. M. L. Coutts; *Honorary Secretary*, Dr. R. F. Back. Membership, 100. Five meetings were held.

Annual Meeting of Delegates.

The twenty-third annual meeting of delegates of the affiliated Local Associations of Members with the Council was held on Friday, October 4, 1935. An account of the proceedings of the meeting appeared in The Medical Journal of Australia of October 26, 1935, pages 602-606.

The delegates present at the meeting were as follows: *Canterbury-Bankstown*, Dr. Kevin Byrne; *Central Northern*, Dr. A. T. Roberts; *Central Southern*, Dr. G. A. Buchanan; *Central Western*, Dr. G. N. M. Aitkens; *City*, Dr. A. M. Gledden; *Eastern Suburbs*, Dr. G. J. Duncan; *Illawarra Suburbs*, Dr. W. F. Simmons; *Kuring-gai District*, Dr. B. G. Wade; *Northern District*, Dr. A. G. Brydon; *North-Eastern*, Dr. R. V. Graham; *South-Eastern*, Dr. H. H. Lee; *South Sydney*, Dr. P. J. Markell; *Warringah District*, Dr. E. A. Tivey; *Western*, Dr. J. T. Paton; *Western Suburbs*, Dr. W. H. Donald.

Sections for the Study of Special Branches of Medical Knowledge.

Anæsthesia (inaugurated 1934): *Chairman*, Dr. W. I. T. Hotten; *Honorary Secretary*, Dr. H. J. Daly. One meeting was held in conjunction with a meeting of the Branch.

Genito-Urinary and Venereal Diseases (inaugurated 1928).

Hygiene and Preventive Medicine (inaugurated 1922).

Medical Literature and History (inaugurated 1925): *Honorary Secretaries*, Dr. H. M. Moran and Dr. L. Cowlishaw.

Medicine (inaugurated 1924): *Chairman*, Dr. O. A. Diethelm; *Vice-Chairmen*, Dr. H. J. Ritchie, Dr. A. S. Walker, Dr. E. H. Stokes; *Honorary Secretary*, Dr. K. B. Noad. Six meetings were held, including three in conjunction with meetings of the Branch.

Neurology and Psychiatry (inaugurated 1924): *Chairman*, Dr. H. M. North; *Vice-Chairman*, Dr. J. A. L. Wallace; *Honorary Secretary*, Dr. D. W. H. Arnott. Five meetings were held, including three in conjunction with meetings of the Branch.

Obstetrics and Gynæcology (inaugurated 1925): *Chairman*, Dr. R. I. Furber; *Vice-Chairman*, Dr. A. J. Gibson; *Honorary Secretary*, Dr. H. A. Ridler. Four meetings were held.

Orthopædics (inaugurated 1923): *Chairman*, Dr. S. H. Scougall; *Vice-Chairman*, Dr. G. Keith Smith; *Honorary Secretary*, Dr. F. H. McClements Callow. Four meetings were held, including two in conjunction with meetings of the Branch.

Oto-Rhino-Laryngology (inaugurated 1924): *Chairman*, Dr. Garnet Halloran; *Vice-Chairman*, Dr. H. S. Kirkland; *Honorary Secretary*, Dr. E. P. Blashki. Five meetings were held, including two in conjunction with meetings of the Branch.

Pædiatrics (inaugurated 1921): *Chairman*, Dr. W. C. Petherbridge; *Vice-Chairmen*, Dr. F. C. Rogers, Dr. T. Y. Nelson; *Honorary Secretary*, Dr. L. H. Hughes. Five meetings were held, including two in conjunction with meetings of the Branch.

Pathology and Bacteriology (inaugurated 1924): *Chairman*, Dr. Oliver Latham; *Honorary Secretary*, Dr. E. F. Thomson. Four meetings were held, including one in conjunction with a meeting of the Branch.

Radiology (inaugurated 1926): *Chairman*, Dr. J. G. Edwards; *Honorary Secretary*, Dr. A. T. Nisbet. Three meetings were held, including one in conjunction with a meeting of the Branch.

Study of Cancer (inaugurated 1928).

Surgery (inaugurated 1925): *Chairman*, Dr. John Colvin Storey; *Honorary Secretary*, Dr. C. E. Winston. Five meetings were held, including four in conjunction with meetings of the Branch.

British Medical Association Lectures.

Lectures were arranged as follows:

North-Eastern Medical Association, Lismore, April 13, 1935: Dr. W. Evans, "The Treatment of Nephritis".

Northern District Medical Association, Tamworth, September 25, 1935: Dr. T. Dixon Hughes, "Some Gynæcological Conditions in General Practice".

Western Medical Association, Dubbo, September 25, 1935: Dr. A. L. Dawson, "Diseases of the Skin from the General Practitioner's Point of View".

Post-Graduate Study.

The New South Wales Permanent Post-Graduate Committee held its annual general revision course from May 27 to June 7. Thirty-six members attended. During the course a series of four lectures in applied physiology was delivered by Dr. C. H. Kellaway, Director of the Walter and Eliza Hall Institute of Research in Pathology and Medicine.

In conjunction with the Ophthalmological Society of New South Wales, the Committee arranged a course in practical ophthalmology, November 4 to 15, fifteen members attending.

Week-end courses were held at the following country centres: (*a*) Lismore, August 10 and 11; attendance, 14. (*b*) Orange, December 14 and 15; attendance, 25.

Lectures were arranged as follows:

(*a*) Two lectures, "Prognosis and Treatment of the Toxæmias of Pregnancy" and "The Management of Delayed Labour", October 21 and 23, by Mr. J. B. Banister, M.D., F.R.C.S., F.R.C.P., F.C.O.G., Senior Obstetric Physician to the Charing Cross Hospital and Consulting Obstetrician to Queen Charlotte's Hospital. Average attendance, 38.

(*b*) Four lectures, "The German Viewpoint of Treatment of Cancer of the Cervix Uteri", "A Course of Obstetrical and Gynæcological Diagnosis", "Sex Hormones", "Practical Application of Hormones: Diagnosis and Treatment", by Professor L. Fraenkel, Director of the University Gynæcological Clinic of Breslau. Average attendance, 44.

(*c*) A lecture, "The Mechanics of Digestion", by Dr. A. E. Barclay, O.B.E., Director, Radiological Department, Royal Infirmary, Edinburgh. Attendance, 30.

During the year the Committee made representations to the Honourable H. P. FitzSimons, M.L.A., Minister for Health, that a special hospital should be built for post-graduate study. The Minister subsequently advised that the constitution of the Prince Henry Hospital would be altered so as to make it available for post-graduate teaching.

As a result of the deliberations and recommendations of a subcommittee appointed to inquire into the teaching for higher degrees, the Committee, after securing the approval of the Council, made arrangements for its duties and functions to be taken over, as from November 30, 1935, by a committee of the University—the New South Wales Post-Graduate Committee in Medicine—the personnel of which, with the exception of the *ex officio* members of the University, was the same as that of the old committee.

All monies (£332) and properties of the New South Wales Permanent Post-Graduate Committee were transferred to the New South Wales Post-Graduate Fund in Medicine for the purposes of the new committee as a gift from the Branch, to which such funds and property reverted when the committee ceased to function.

The Council has placed on record its appreciation of the good work done by the New South Wales Permanent Post-Graduate Committee.

The Branch is represented on the new committee by two members, elected annually, and no person, except *ex officio* members or the representative of the Faculty of Medicine, can be a member of the committee unless he be a member of the New South Wales Branch, British Medical Association.

Federal Council.

The Federal Council of the British Medical Association in Australia met in Melbourne on Saturday, September 7, 1935, Dr. George Bell and Dr. A. M. Davidson (substitute for Dr. J. A. Dick) attending as representatives of the Branch. Reports of the proceedings of the meeting appeared in THE MEDICAL JOURNAL OF AUSTRALIA, July 28, 1935.

The Council also met on March 17, 1936, the Branch representatives being Dr. George Bell and Dr. J. A. Dick.

Australasian Medical Congress (British Medical Association).

The Fifth Session of the Australasian Medical Congress (British Medical Association) will be held in Adelaide towards the end of August, 1937.

103rd Annual Meeting, British Medical Association.

The 103rd annual meeting of the British Medical Association, the most important medical gathering that has taken place in the Commonwealth, was held at the University of Melbourne, September 9 to 14, 1935.

The great success which attended the organization and management of the meeting is a matter for hearty congratulations to all concerned, particularly the President, Sir James Barrett, the Local General Secretary, Dr. J. P. Major, and the Executive Committee.

The material presented at the sectional meetings was of high scientific value and the entertainment of visiting members was gracious and generous.

The Branch was well represented at the meeting, 221 members attending.

The entertainment afforded by the Branch to the overseas members and visitors during their short stay in Sydney was as follows:

Friday, September 6: Luncheon. Addresses of welcome by the President, Dr. A. M. Davidson, and the Honourable B. S. B. Stevens, M.L.A., Premier of New South Wales.

Saturday, September 7: Harbour excursion and luncheon at Taronga Park Zoo. Guests of State Government and the Branch.

Tuesday and Wednesday, September 17 and 18: Trip to Blue Mountains and Caves. Guests of State Government.

Wednesday evening, September 18: Ball. Guests of the Branch and the Royal Prince Alfred Hospital Resident and Ex-Resident Medical Officers' Association.

"The Medical Journal of Australia."

The Council's appreciation of the able manner in which the proceedings of the 103rd annual meeting of the British Medical Association were reported was conveyed to the Editor, THE MEDICAL JOURNAL OF AUSTRALIA.

Premises.

The gold medal of the Royal Institute of British Architects for the period 1930-1933 was awarded to Messrs. Fowell and McConnel for their design of the Association's premises, British Medical Association House.

A plaque, presented by the Royal Institute for affixing to the building, and which is placed in the entrance vestibule, was unveiled by the Lord Mayor of Sydney, the late Sir Alfred Parker, on May 23, 1935.

The premises revenue account discloses a net deficit of £294 15s. 5d., as against a net surplus of £2,857 4s. 5d. for the year ended December 31, 1934, being a difference of £3,151 19s. 10d. This reduction of £3,151 19s. 10d. in the net amount of revenue earned is mainly due to the cost of painting of the exterior of the building during 1935, together with the provision of £2,800 for depreciation.

A comparison of the annual percentages of expenditure to revenue from the time of opening the building in 1930 up to December 31, 1935, is as follows:

	Percentage of Expenses to Revenue.	Percentage of Result to Revenue.
½ year to December 31, 1930	119·4	Deficiency 19·4
1 year to December 31, 1931	114·8	Deficiency 14·8
1 year to December 31, 1932	109·8	Deficiency 9·8
1 year to December 31, 1933	97·9	Surplus 2·1
1 year to December 31, 1934	77·7	Surplus 22·3
1 year to December 31, 1935 (including depreciation)	102·1	Deficiency 2·1

The percentages of rent revenue, expenses and depreciation and the percentage of net deficit for the year to the capital value of the British Medical Association House, as shown by the books at December 31, 1935, namely, £182,747, is as follows:

Rent Revenue (including amount charged for British Medical Association, New South Wales Branch, offices *et cetera*)		7·62%
Sundry Expenses, Interest *et cetera*	6·25%	
Depreciation of Building	1·53%	
		7·78%
Net Deficit for Year		0·16%

Articles and By-Laws.

A copy of the Articles and By-Laws, as amended to date, was forwarded to each member on July 12, 1935.

Workers' Compensation Act, 1926-29.

Although a number of inquiries in regard to fees for attendance on injured workers has been received from members and also insurers, the arrangement between the Licensed Insurers and the Council, under which the insurers, who are parties to it, undertake to pay directly to medical attendants of "injured workers" their fees and charges, subject to these being in accordance with a schedule, Schedule "E", appears to be working with some considerable measure of satisfaction to the members interested as well as to the insurers.

Contract Practice.

A. Friendly Society Lodges.

1. The Common Form of Agreement for use between Medical Officer and Friendly Society Lodge has been amended as from July 1, 1935:

a. By the insertion after the word "performed" in Clause 18 of the following words: "Other than a minor surgical operation not requiring a local or general anæsthetic." So that Clause 18 will now read: "When any surgical operation is performed other than a minor surgical operation not requiring a local or general anæsthetic, it shall be paid for by the member, and the fee for such shall be a matter for private arrangement between the member and the operating surgeon."

b. By the deletion of Clause 17 and the substitution in lieu thereof of the following clause: "In any case in which the medical officer shall visit a member as hereinbefore set out, at a place more than two miles from his residence, mileage shall be payable as follows: (*a*) Within the boundaries of the metropolitan area, 3s. 6d. per mile for every mile or fraction thereof beyond such two miles travelled on the outward journey in the day-time, and 5s. per mile or fraction thereof so travelled in the night-time. (*b*) Outside the boundaries of the metropolitan area, 5s. per mile for every mile or fraction thereof beyond such two miles travelled on the outward journey in

the day-time, and 7s. 6d. per mile or fraction thereof so travelled in the night-time. For the purpose of this agreement night-time shall be from 8 p.m. to 8 a.m. Such mileage shall be payable at the time of each visit whether the same be made in connexion with illness, injury, confinement, or attendance for any other purpose."

c. By the extension of the metropolitan area to include that part of the Municipality of Holroyd lying between the main Western Road and main Western Line, that part of the Shire of Blacktown lying to the east of Seven Hills Road, and that part of the Shire of Baulkham Hills lying to the south of Seven Hills Road.

2. At the request of the Friendly Societies' Association the executive officers of that body met the Medical Politics Committee on October 22, 1935, to discuss the advisability of seeking an interview with the Minister in charge of the proposed National Insurance Bill, with the object of conserving the rights of members of the Association and of friendly societies.

As the question of health insurance is one which concerns all the branches in Australia, the representatives of the Friendly Societies' Association were advised to communicate with the Federal Council.

B. Colliery.

1. By arrangement with the Illawarra District of the Australasian Coal and Shale Employees' Federation, the Form of Agreement between Medical Officer and the Federation has been amended so as to exclude from medical benefits any subscriber who, for the time being, is entitled to the benefits of the *Workers' Compensation Act*, 1926-29.

2. The rules of the Barrier (Broken Hill) Miners' Amalgamated Medical and Surgical Fund have been varied so as to exclude from medical benefits any injured worker entitled to the benefits of the *Workers' Compensation Act*, 1926-29, or the *Workmen's Compensation (Broken Hill) Act*, 1920-1934, or the *Commonwealth Employees' Compensation Act*, 1930.

Handbook for Qualified Medical Practitioners.

A copy of a handbook, containing much useful information and advice as to matters known to be often the subject of doubt or difficulty to medical practitioners, has been forwarded to each member.

Ambulance Transport of Fractured Thighs.

Representations have been made to the New South Wales Ambulance Transport Service Board urging the adoption as standard equipment of the Thomas splint for the transport of fractures of the thigh and leg.

Representations have also been made to the Hospitals Commission urging that the splint be made part of the standard equipment of the casualty department of every public hospital so that an ambulance would be able to regain its full equipment without removing the splint from the patient.

A copy of the report of the committee appointed by the Council to consider the merits of the Thomas modification of the Thomas splint was forwarded to both the Ambulance Transport Board and the Hospitals Commission.

Immunization against Diphtheria.

Representations have been made to the Minister for Health urging the institution of a State-wide plan of immunization against diphtheria.

Maternal and Infantile Welfare.

A committee, consisting of Dame Constance D'Arcy, Professor J. C. Windeyer, Dr. A. M. Davidson, Dr. E. S. Morris, Dr. F. Brown Craig, Dr. L. Dey, Dr. A. J. Gibson and Dr. J. N. Chesterman, has been appointed to investigate maternal and infantile welfare and report to the Council.

British Medical Agency of New South Wales Limited.

June, 1935, marked the end of the fourth complete year since the inception of the Agency, and at the annual meeting held in October, 1935, the directors reported to the Council that business resulted in a profit during that year of £174 12s.

Although this was not as great as was anticipated, after the previous year's profit of £350, the directors felt that it was a satisfactory result in view of the fact that increased expenses incurred during the year were necessary for the consolidation of existing business.

A large percentage of members already appreciate the advantages to be secured by consulting the Agency on all matters connected with the business side of medical practice, and the support which has been afforded by them is greatly appreciated, as it indicates the increasing value of the Agency to the profession as a whole.

The directors feel confident that good profits will be shown in future from year to year, and urge all members to place their business matters in the hands of the Agency staff, where they are assured of the best of service, attention and security. Those who have not availed themselves of the facilities offered by the Agency are asked to consult them on any of the following matters: (i) supplying of reliable *locum tenentes* and assistants; (ii) valuation, sale and purchase of medical practices and partnerships; (iii) life and endowment assurances; (iv) fire and accident insurances; (v) duplicating and copying service; (vi) book-keeping and accounts service.

In addition to the above, the Agency is now keeping the books and records of the New South Wales Medical Defence Union Limited, by contract with the Union, and also acts as assistant secretary to the Medical Benevolent Association of New South Wales.

Congratulations.

Letters of congratulation were sent to Sir Hugh Devine, of Melbourne, Dame Constance D'Arcy, D.B.E., Dr. A. E. Colvin, C.B.E., and the late Mr. A. W. Green, O.B.E., on the honour conferred on them by His late Majesty King George V.

Visitors.

Dr. G. F. McCleary, M.D., D.P.H., late Senior Medical Officer, Ministry of Health, England, who was passing through Sydney, kindly delivered an interesting and instructive address, on national health insurance in Great Britain, to members of the Council and representatives of Local Associations on Wednesday evening, February 5, 1936.

Social.

The Council entertained the members of the Federal Council and of the Australasian Medical Publishing Company, Limited, at dinner at the University Club on Monday evening, March 16, 1936.

The delegates to the Second International Pacific Health Conference were invited to the luncheon arranged to welcome the overseas visitors to the 103rd annual meeting, British Medical Association.

A handsome cup for an annual golf competition amongst members of the Association has been donated by Dr. H. C. Rutherford Darling. The first winner of the cup was Dr. V. M. Rich, the runner-up being Dr. J. W. Farrar.

Financial Statements.

Dr. George Bell moved that the statement of receipts and expenditure be received. The motion was seconded by Dr. W. Vickers and carried. The statements are published herewith. Dr. Bell also dealt with the balance sheet and financial statement of the premises account. Dr. Vickers seconded Dr. Bell's motion that the statements be received and the motion was carried.

ELECTION OF OFFICE-BEARERS.

Dr. Davidson announced that the following had been elected members of the Council for the ensuing year: Dr. G. M. Barron, Dr. George Bell, Dr. C. B. Blackburn, Dr. K. S. M. Brown, Dr. A. J. Collins, Dr. Lindsay Dey, Dr. B. T. Edye, Dr. A. J. Gibson, Dr. R. V. Graham, Dr. Hugh Hunter, Dr. W. Keith Inglis, Dr. C. H. E. Lawes, Dr. R. J. Millard, Dr. A. A. Palmer, Dr. J. Colvin Storey, Dr. W. Vickers, Dr. A. S. Walker, Dr. G. C. Willcocks.

On the motion of Dr. C. H. E. Lawes, seconded by Dr. A. A. Palmer, Dr. James Adam Dick was elected a Vice-President of the Branch. In moving the motion, Dr. Lawes said that this honour had only once before been conferred on a member. Dr. Dick had been a member of the Council since 1902, President in 1910-1911, Honorary Librarian for thirty years, and representative of the Branch on the Federal Council since 1921.

Messrs. Coates, Cunningham and Stiffe, chartered accountants, were appointed auditors for the ensuing year.

On the motion of Dr. A. S. Walker, seconded by Dr. L. Dey, Dr. J. G. Hunter was appointed a representative and Dr. W. K. Inglis deputy representative of the Branch on the Representative Body, 1936-1937.

On the motion of Dr. A. S. Walker, seconded by Dr. Hugh Hunter, Dr. W. K. Inglis and Dr. B. T. Edye were

BRITISH MEDICAL ASSOCIATION—NEW SOUTH WALES BRANCH.

Balance Sheet as at December 31, 1935.

LIABILITIES.	£ s. d.	£ s. d.
Debentures—		
263 4% Series "A", £10 each	2,630 0 0	
448 4·65% Series "B", £50 each	22,400 0 0	
248 4·65% Series "C", £10 each	2,480 0 0	
	27,510 0 0	
Less Amount unpaid	62 0 0	
		27,448 0 0
Interest Accrued on Debentures		4,974 18 1
Australian Mutual Provident Society (secured by Mortgage over Property, B.M.A. House, 135-137, Macquarie Street, Sydney)	95,000 0 0	
Interest Accrued	356 5 0	
		95,356 5 0
Sundry Deposits at Call		980 0 0
Sundry Creditors		752 7 4
Subscriptions Paid in Advance		29 13 0
Accumulated Funds Account—		
Balance at December 31, 1934	58,443 3 4	
Less Deficit in Revenue Account for twelve months ended December 31, 1935—		
Premises Account—Deficit £294 15 5		
Less Branch Account—Surplus £267 9 0	27 6 5	
		58,415 16 11
		£187,957 0 4

ASSETS.	£ s. d.	£ s. d.
Land and Buildings—		
B.M.A. House, 135-137, Macquarie Street, Balance at December 31, 1934	185,547 7 4	
Less Amount written off for Depreciation	2,800 0 0	
		182,747 7 4
Library—		
Balance at December 31, 1934	985 2 2	
Add Additions	84 3 10	
	1,069 6 0	
Less Depreciation	98 10 3	
		970 15 9
Office Furniture and Equipment—		
Balance at December 31, 1934	189 4 3	
Add Additions	75 4 0	
	264 8 3	
Less Depreciation	18 18 5	
		245 9 10
Debentures in Other Companies—		
Australasian Medical Publishing Co., Ltd. (Face Value)		100 0 0
Sundry Debtors—		
Tenants' Account—		
Rent	1,848 11 0	
Partitions	504 9 5	
Fixtures and Fittings	56 2 11	
Sundries	18 17 6	
		2,428 0 10
Commercial Banking Company of Sydney, Limited—		
Credit Balance, Branch Account	1,578 6 7	
Less Overdraft—Premises Account	725 14 3	
		852 12 4
Cash on Hand		4 3 6
Prepaid Expenses		608 10 9
		£187,957 0 4

We have examined the books and vouchers of the New South Wales Branch of the British Medical Association for the twelve months ended December 31, 1935, and we certify that in our opinion the above Balance Sheet and accompanying Income and Expenditure Accounts represent the true financial position of the Association at December 31, 1935, and the transactions for the year ended that date, respectively, as shown by the books of the Association and information supplied us.

(*Sgd.*) GEORGE BELL, Honorary Treasurer.
(*Sgd.*) A. M. DAVIDSON, President.
(*Sgd.*) R. J. STIFFE, F.C.A. (Aust.), Financial Secretary.
Sydney, January 6, 1936.

(*Signed*) COATES, CUNNINGHAM & STIFFE,
Chartered Accountants (Aust.).

Branch Account.

Income and Expenditure Account for Twelve Months ended December 31, 1935.

	£ s. d.	£ s. d.		£ s. d.	£ s. d.
To Salaries *et cetera*—			By Subscriptions received—		
Medical Secretariat and Staff (5)	1,955 1 0		1935	7,847 2 6	
Financial Secretariat (1)	150 0 0		1934	391 2 0	
Librarian (1)	185 10 0		Previous Years	74 17 6	
		2,290 11 0			8,313 2 0
„ Rent—Offices *et cetera*	1,000 0 0		*Less* Proportion due to British Medical Association	2,123 16 7	
„ Printing and Stationery	366 2 6		The Medical Journal of Australia	1,666 0 0	
„ Stamps and Telegrams	158 19 9				3,789 16 7
„ Telephones	91 15 2				4,523 5 5
„ Legal Expenses	60 11 0		„ Interest	8 0 0	
„ Travelling Expenses	37 8 0		„ Donations—Library	3 3 0	
„ Insurance	4 13 7		„ Rent, Assembly Hall	77 2 6	
„ Exchange and Bank Charges	6 11 7		„ Sales, C.F.A. *et cetera*	12 5 0	
„ Refreshments—Meetings	15 0 0				100 10 6
„ Newspapers	4 2 0				
„ Sundry Petty Expenses	15 4 4				
„ Freight on Books	1 1 10				
„ Federal Council	159 16 0				
„ Code Address	0 13 0				
„ Tea Money	13 5 0				
„ Repairs, Epidiascope	3 6 3				
„ Repairs, Clock	4 10 0				
„ University Club Luncheon	5 7 3				
		1,948 7 3			
„ Depreciation—					
Library	98 10 3				
Office Furniture and Equipment	18 18 5				
		117 8 8			
„ Balance—Surplus for the twelve months ended December 31, 1935, transferred to Accumulated Funds Account		267 9 0			
		£4,623 15 11			£4,623 15 11

appointed delegates to attend the one hundred and fourth annual meeting of the Association, to be held at Oxford on July 21 to 24, 1936.

Incoming President's Address.

Dr. E. H. M. Stephen delivered his president's address (see page 525). A vote of thanks was passed to Dr. Stephen on the motion of Dr. A. J. Gibson, seconded by Dr. J. Colvin Storey.

Induction of President.

Dr. A. M. Davidson inducted the President for the year 1936-1937 (Dr. E. H. M. Stephen). Dr. Stephen thanked the members for his election and the meeting closed with a vote of thanks to the retiring President, Dr. A. M. Davidson, moved by Dr. E. H. M. Stephen.

Correspondence.

TUBERCULOUS MENINGITIS WITH RECOVERY.

Sir: I note with interest in the current issue of the journal a communication by Dr. John A. McLean, in which he doubts the diagnosis of the case of tuberculous meningitis reported by me in the issue of March 14, and substitutes therefor a diagnosis of "acute benign lymphocytic meningitis". I await the publication of this case eagerly, but in the meantime I might amplify the notes as published by adding that, together with the charts, they were seen by several eminent pædiatricians at the British Medical Association meeting in September last before being submitted for publication. They concurred in the diagnosis. The child has been, and still is, positive to tests for tuberculosis, and has radiographic evidence of a primary focus in the lung. The father has an open lesion and a younger brother is tuberculous. The consultant, a man of thirty years' experience in England and Australia, was never in doubt as to a diagnosis. For my own humble part, may I say that the picture of tuberculous meningitis is quite familiar, I having followed the progress of many cases during internship at a large children's hospital. Naturally, I was very surprised at the recovery of this patient. But other recoveries are authenticated—at least twenty according to one author; why "couldn't it happen here?"

My attitude, then, is to remain obdurate, in very distinguished company, and hold to the original diagnosis, fitting in, as far as one may reasonably expect, with the established facts, rather than to fly to the diagnosis of an apparently less fatal malady, though doubtless very similar in many respects, to explain a recovery.

Yours, etc.,

Queen Street,
Boorowa,
March 30, 1936.

Bertrand Cook.

A CASE OF AGRANULOCYTOSIS.

Sir: I am glad that the publication of "A Case of Agranulocytosis" has aroused the interest of Dr. A. E. Finckh, with whose remarks I am largely in agreement. As he points out, there is one type of agranulocytosis which appears to be symptomatic and one, that described by Schultz, which has no obvious relation to septic or other morbid conditions.

But I should like to point out that I deprecate the use of the word "agranulocytosis" at all; I have only used it on account of its almost universal popularity in the literature. It is better to speak of a "neutropenia", a term which may be qualified by appropriate adjectives, such as "symptomatic", "essential" *et cetera*. The giving of a name does not constitute a "disease", that philosophic fiction of medical science, nor does the description of a syndrome by Schultz or any other authority fix the symptomatology, except from the purely historical point of view.

Yours, etc.,

ALLAN S. WALKER.

185, Macquarie Street,
Sydney,
April 3, 1936.

SIR: Dr. Allan S. Walker was kind enough to send me a copy of his letter of April 3 to you, in reference to my previous letter on "agranulocytosis". I employed that word because it had been made use of by Dr. Walker. Some ten years ago the word "granulocytopenia" was introduced for this condition and is now found in most treatises on blood diseases. The condition, "as a disease", is spoken of as "*granulocytopenia typus* Schultz".

Yours, etc.,

ALFRED E. FINCKH.

227, Macquarie Street,
Sydney,
April 7, 1936.

PSYCHOANALYSIS.

SIR: Dr. Adey rushes to the defence of psychoanalysis with an enthusiasm worthy of a better cause. I would like to direct his attention to one or two errors in his letter in your journal of April 4, 1936.

Psychoanalysis has not been established for forty years; the first publication by Freud was in 1908 and the first English edition of his "Introductory Lectures" did not appear until 1922. It is only in the past decade that his teachings have become widely known, and this, of course, is largely due to the "quacks", who received them gratefully, realizing their possibilities as a source of income, and not because of any intrinsic scientific merit they possess.

The theory of infantile sexuality is utterly wrong. Of this I am convinced from my own experience with neuroses and psychoneuroses during a period of five years as Senior Medical Officer at Broughton Hall Psychiatric Clinic, which deals almost exclusively with such cases. I have not found that the Freudian interpretation of dreams is applicable either. These views are shared by professors of psychiatry, psychology and philosophy, so, if I err, I at least do so in good company.

It would require a volume to enumerate all the fallacies and errors of judgement found in the works of Freud, Brill, Steckel, Ernest Jones, Ferenczi and other champions of psychoanalysis, so one can only deal with the "isolated portions of a theory". An excellent example of the bizarre ideas which germinate in the minds of the Freudian disciples was recently seen in a paper on the sexual significance of art. By taking various famous paintings and drawing lines joining the right eyebrow, left ear, left elbow and other portions of the anatomy of the central figures the author succeeded in producing phallic symbols. This remarkable result was seriously offered as proof of his hypothesis that everything had a sex basis. This bright article appeared in the *International Journal of Psychoanalysis* and may be read by anyone who is prepared to suffer that "mental dyspepsia" which Dr. W. S. Dawson so aptly terms the condition which results from listening to such theories. Surely oblivion is too mild a retribution to befall those who put forward such preposterous suggestions.

Dr. Adey draws an analogy between the psychoanalyst's conception of the mental processes of those whom I esteem and the diagnosis of carcinoma of the liver made by a, presumably, reputable surgeon. It would have been more apt to have compared the former with a diagnosis made by a chiropractor or an osteopath.

I consider that psychoanalysis, in many cases, is a positive menace to a patient's peace of mind. If he is at all suggestible, much psychic damage may be done by false assumptions and conclusions on the part of the analyst. I have known an unfortunate individual to attempt suicide because it had been suggested, in the course of analysis, that his trouble was due to a latent homosexuality. This is not an isolated case.

A psychological approach is necessary in dealing with patients, but one need rarely go further back than a year or two in their lives to discover the origin of the trouble. I have never obtained a history of an illicit passion for a maternal great-aunt, conceived at the age of three, in even the most pronounced neurosis.

Surely there is no need to wallow in sexual phantasies and to use an almost unintelligible jargon of neologisms to help a patient to rehabilitate himself psychologically. Without doubt there are innumerable alienists and psychologists who can report success without ever having had to employ the debasing inquisitiveness of a Peeping Tom, which seems so essential a part of the psychoanalytic technique.

Yours, etc.,

JOHN MCGEORGE.

183, Macquarie Street,
Sydney,
April 5, 1936.

Medical Prizes.

HUNTERIAN SOCIETY: GOLD MEDAL FOR PRACTITIONERS.

ANY registered general practitioner resident within the British Empire is eligible to compete for the Hunterian Society's gold medal for practitioners. The medal, which is of gold, is awarded annually to the writer of the best essay on a subject selected by the Hunterian Society.

Competitors—men or women—must be engaged in general practice, and essays should be sent in by December 31. The essay must be unpublished and original, and be based on the candidate's own observation, but it may contain excerpts from the literature on the subject, provided that reference be made to the articles from which they are taken.

A copy of the rules and any further information can be obtained on application to the Honorary Secretary, Mr. Arthur Porritt, 27, Harley Street, London, W.1.

The subject selected for 1936 is: "Rheumatoid Arthritis: Its Diagnosis, Treatment and End Results". For 1937 the subject is: "The Prognosis and Care of Heart Disease in General Practice".

The subject for 1935 was: "Conduct of Midwifery in General Practice". The gold medal was awarded to Dr. Francis Bennett, of Christchurch, New Zealand. This is the first occasion on which the medal has been awarded to a practitioner resident outside Great Britain.

Obituary.

HENRY JOHN WOLBERTON BRENNAND.

WE regret to announce the death of Dr. Henry John Wolberton Brennand, which occurred at Sydney, New South Wales, on April 11, 1936.

Books Received.

UROLOGY IN WOMEN: A HANDBOOK OF URINARY DISEASES IN THE FEMALE SEX, by E. Catherine Lewis, M.S., F.R.C.S.; Second Edition; 1936. London: Baillière, Tindall and Cox. Medium 8vo, pp. 108, with illustrations. Price: 6s. net.

A TEXTBOOK OF ROENTGENOLOGY: THE ROENTGEN RAY IN DIAGNOSIS AND TREATMENT, by Bede J. Michael Harrison, M.B., Ch.M., D.M.R.E., F.A.C.R., with preface by A. Howard Pirie; 1936. Baltimore: William Wood and Company. Medium 8vo, pp. 852, with illustrations. Price: $10.00 net.

Diary for the Month.

APR. 21.—New South Wales Branch, B.M.A.: Ethics Committee.
APR. 21.—Tasmanian Branch, B.M.A.: Council.
APR. 22.—Victorian Branch, B.M.A.: Council.
APR. 23.—New South Wales Branch, B.M.A.: Clinical Meeting.
APR. 24.—Queensland Branch, B.M.A.: Council.
APR. 28.—New South Wales Branch, B.M.A.: Medical Politics Committee.
APR. 30.—South Australian Branch, B.M.A.: Branch.
APR. 30.—New South Wales Branch, B.M.A.: Branch.
MAY 1.—Queensland Branch, B.M.A.: Branch.
MAY 4.—New South Wales Branch, B.M.A.: Organization and Science Committee.
MAY 5.—Tasmanian Branch, B.M.A.: Council.
MAY 6.—Western Australian Branch, B.M.A.: Council.
MAY 6.—Victorian Branch, B.M.A.: Branch.
MAY 7.—South Australian Branch, B.M.A.: Council.
MAY 8.—Queensland Branch, B.M.A.: Council.
MAY 12.—Tasmanian Branch, B.M.A.: Branch.
MAY 12.—New South Wales Branch, B.M.A.: Executive and Finance Committee.
MAY 19.—Tasmanian Branch, B.M.A.: Council.

Medical Appointments.

Dr. J. Coffey, in pursuance of the provisions of *The Insanity Act of* 1884, has been appointed Official Visitor to the Hospital for Insane, Toowoomba, Queensland.

* * * *

Dr. T. S. Campbell, in pursuance of the provisions of the *Workers' Compensation Act*, 1928, has been appointed Certifying Medical Practitioner and also Medical Referee at Kew, Victoria.

Medical Appointments Vacant, etc.

FOR announcements of medical appointments vacant, assistants, *locum tenentes* sought, etc., see "Advertiser", pages xvi-xviii.

AUSTIN HOSPITAL FOR CANCER AND CHRONIC DISEASES, HEIDELBERG, VICTORIA: Honorary Officers, Resident Medical Officer.

DEPARTMENT OF PUBLIC HEALTH, SYDNEY, NEW SOUTH WALES: Medical Officers.

KALGOORLIE DISTRICT HOSPITAL, KALGOORLIE, WESTERN AUSTRALIA: Resident Medical Officer.

LAUNCESTON PUBLIC HOSPITAL, LAUNCESTON, TASMANIA: Medical Superintendent.

MATER MISERICORDIÆ HOSPITAL, WARATAH, NEW SOUTH WALES: Resident Medical Officer.

MOTHERS' AND BABIES' HEALTH ASSOCIATION (INCORPORATED), ADELAIDE, SOUTH AUSTRALIA: Honorary Medical Officer.

ROYAL AUSTRALIAN AIR FORCE: Medical Officer.

TARA DISTRICT HOSPITAL, TARA, QUEENSLAND: Medical Officer.

THE EASTERN SUBURBS HOSPITAL, SYDNEY, NEW SOUTH WALES: Honorary Assistant Physician.

YALLOURN HOSPITAL, YALLOURN, VICTORIA: Junior Resident Medical Officer.

Medical Appointments: Important Notice.

MEDICAL PRACTITIONERS are requested not to apply for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Branch named in the first column, or with the Medical Secretary of the British Medical Association, Tavistock Square, London, W.C.1.

BRANCHES.	APPOINTMENTS.
NEW SOUTH WALES: Honorary Secretary, 135, Macquarie Street, Sydney.	Australian Natives' Association. Ashfield and District United Friendly Societies' Dispensary. Balmain United Friendly Societies' Dispensary. Friendly Society Lodges at Casino. Leichhardt and Petersham United Friendly Societies' Dispensary. Manchester Unity Medical and Dispensing Institute, Oxford Street, Sydney. North Sydney Friendly Societies' Dispensary Limited. People's Prudential Assurance Company Limited. Phœnix Mutual Provident Society.
VICTORIAN: Honorary Secretary, Medical Society Hall, East Melbourne.	All Institutes or Medical Dispensaries. Australian Prudential Association, Proprietary, Limited. Mutual National Provident Club. National Provident Association. Hospital or other appointments outside Victoria.
QUEENSLAND: Honorary Secretary, B.M.A. Building, Adelaide Street, Brisbane.	Brisbane Associate Friendly Societies' Medical Institute. Chillagoe Hospital. Richmond District Hospital, North Queensland. Members accepting LODGE appointments and those desiring to accept appointments to any COUNTRY Hospital are advised, in their own interests, to submit a copy of their Agreement to the Council before signing.
SOUTH AUSTRALIAN: Secretary, 207, North Terrace, Adelaide.	All Lodge appointments in South Australia. All Contract Practice Appointments in South Australia.
WESTERN AUSTRALIAN: Honorary Secretary, 205, Saint George's Terrace, Perth.	All Contract Practice Appointments in Western Australia.
NEW ZEALAND (Wellington Division): Honorary Secretary, Wellington.	Friendly Society Lodges, Wellington, New Zealand.

Editorial Notices.

MANUSCRIPTS forwarded to the office of this journal cannot under any circumstances be returned. Original articles forwarded for publication are understood to be offered to THE MEDICAL JOURNAL OF AUSTRALIA alone, unless the contrary be stated.

All communications should be addressed to "The Editor", THE MEDICAL JOURNAL OF AUSTRALIA, The Printing House, Seamer Street, Glebe, New South Wales. (Telephones: MW 2651-2.)

Members and subscribers are requested to notify the manager, THE MEDICAL JOURNAL OF AUSTRALIA, Seamer Street, Glebe, New South Wales, without delay, of any irregularity in the delivery of this journal. The management cannot accept any responsibility or recognize any claim arising out of non-receipt of journals unless such a notification is received within one month.

SUBSCRIPTION RATES.—Medical students and others not receiving THE MEDICAL JOURNAL OF AUSTRALIA in virtue of membership of the Branches of the British Medical Association in the Commonwealth can become subscribers to the journal by applying to the Manager or through the usual agents and booksellers. Subscriptions can commence at the beginning of any quarter and are renewable on December 31. The rates are £2 for Australia and £2 5s. abroad *per annum* payable in advance.